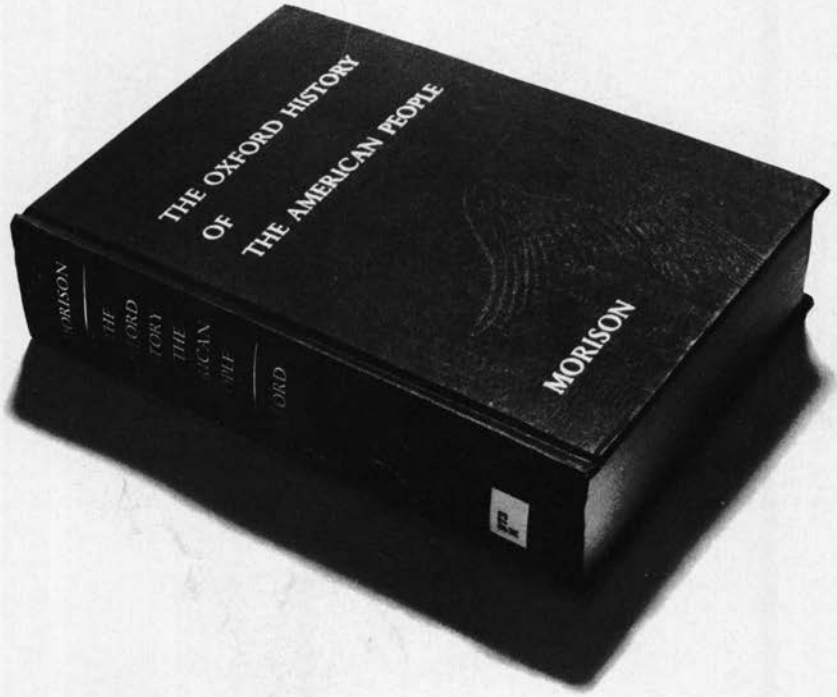
ISSN 0010-0870

COLLEGE & RESEARCH LIBRARIES

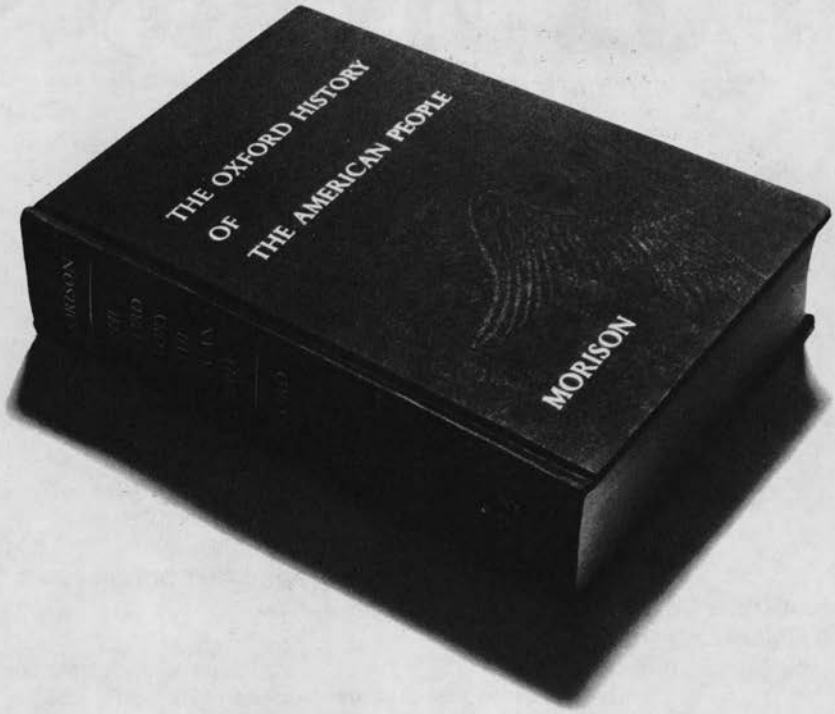
MAY 1976
VOLUME 37
NUMBER 3

AMERICAN LIBRARY ASSOCIATION 1876-1976



Both these books have been treated for use with detection systems.

We salute the
AMERICAN
LIBRARY
ASSOCIATION
1876–1976
Promoting Excellence in Library Service



So why do we believe the book on the left is more likely to be stolen?

Because the book on the right has been treated with a "Tattle-Tape"® book detection strip.

It's no secret there are other detection systems on the market besides ours. And some people might be tempted to think they're all the same.

Wrong.

One of the most important things in a book detection system is to make sure people don't find out how it works. A book thief doesn't mind ripping something out of a book, if that will let him steal it.

The big advantage of the "Tattle-Tape" system is virtual undetectability of treated books. The marker is out of sight.

Another is that with our system, you can also treat magazines and other periodicals.

And, since the "Tattle-Tape" system is full-circulating, patrons can re-enter and leave the library as they please once their books have been charged out.

There are a lot of other differences between the "Tattle-Tape" Brand Book Detection System and our competitors' systems. Before you commit yourself to an investment, we think you should know these important differences.

Whatever your priorities are—whether better service for your patrons, using your budget to put new books on the shelves rather than replacing those stolen, or adding new technology (such as our new 3M Brand Inventory Control System) — a "Tattle-Tape" Book Detection System can help you reach them faster.

To learn more, write to 3M Company, Detection Systems, 3M Center, Bldg. 220-9E, St. Paul, Minnesota 55101.

Tattle-Tape. So you can run a lending library. Instead of a stealing library.

3M COMPANY

Detection Systems

MAY 1976
VOLUME 37
NUMBER 3

COLLEGE & RESEARCH LIBRARIES

CONTENTS

Cover illustration: The Newberry Library, Chicago, Illinois. Drawing by Franklin McMahon (see page 272).

COLLEGE & RESEARCH LIBRARIES

College & Research Libraries is the official journal of the Association of College and Research Libraries, a division of the **American Library Association.** It is published seventeen times per year—six bimonthly journal issues and eleven monthly (combining July-August) News issues—at 1201-05 Bluff St., Fulton, MO 65251.

Manuscripts of articles and copies of books submitted for review should be sent to the Editor: Richard D. Johnson, James M. Milne Library, State University College, Oneonta, New York 13820.

Instructions for authors: Manuscripts are to be sent to the Editor: Richard D. Johnson, James M. Milne Library, State University College, Oneonta, NY 13820. Manuscripts should be in two copies and typed in double space. The title, name and affiliation of the author, and an abstract of 75 to 100 words should precede the article. Notes are to be consecutively numbered throughout the manuscript and typed in double space on separate sheets at the end. The journal follows **A Manual of Style,** 12th ed., rev. (Chicago: University of Chicago Press, 1969) in matters of bibliographic style; and recent issues of this journal may be consulted as well.

Material for the **News** issues should be sent to the News Editor: Mary Frances Collins, University Library, State University of New York at Albany, 1400 Washington Ave., Albany, NY 12222.

Production and Circulation office: 50 E. Huron St., Chicago, IL 60611. Advertising office: Leona Swiech, Advertising Traffic Coordinator, 50 E. Huron St., Chicago, IL 60611. Change of address and subscription orders should be addressed to **College & Research Libraries,** for receipt at the above address, at least two months before the publication date of the effective issue.

Annual subscription price: to members of ACRL, $7.50, included in membership dues; to nonmembers, $15. Retroactive subscriptions not accepted. Single copies and back issues: journal issues, $1.50 each; News issues, $1 each.

Inclusion of an article or advertisement in **C&RL** does not constitute official endorsement by ACRL or ALA.

Indexed in **Current Contents, Current Index to Journals in Education, Library Literature,** and **Science Citation Index.** Abstracted in **Library & Information Science Abstracts.** Core articles abstracted and indexed in **ARTbibliographies, Historical Abstracts** and/or **America: History and Life.** Book reviews indexed in **Book Review Index.**

Second-class postage paid at Fulton, Mo.

DAVID C. WEBER

A Century of Cooperative Programs Among Academic Libraries

A REVIEW OF COOPERATIVE PROGRAMS among colleges and universities over the last century leads to the conclusion that a few very significant developments and changes have taken place during the past decade after ninety years of laborious and diverse effort toward cooperative programs dominated by the effects of national policy and economic conditions. It is an interesting history, one made difficult by the plethora of data. The present paper uses a historical perspective in order to assess better the present and the immediate future. The first part chronologically presents selected examples of cooperative programs. The latter section includes details on a few programs of current special significance, comments on some strengths and weaknesses, and reaches a few conclusions.

EARLY HISTORICAL REVIEW

Before reviewing the past century, it may be worthwhile taking a brief look at circumstances in academic libraries two hundred years ago. At that time academic libraries in America were indeed insignificant by today's perspective. Dartmouth had 305 volumes. Brown University owned 312 volumes including fifty-two received in 1772 which were "by far the greatest donation our little library has yet had." Princeton had more than 1,200 volumes, all to be consumed by fire in 1801. The University of Pennsylvania's chief distinction in 1776 was that during the Revolution it had received a gift of scientific books from Louis XVI. Columbia stored its volumes during the war in the city hall or elsewhere; British soldiers took them to barter for grog, and only six or seven hundred volumes were found—thirty years later—in St. Paul's Chapel. By the time of the Revolution, Yale had collected over 4,000 volumes in its library. The College of William and Mary had a very few thousand volumes. Harvard had lost all but 404 volumes of its library by fire in 1764, yet by the Revolutionary War it had been rebuilt probably to nearly 10,000 volumes.

By 1876 the circumstances were markedly different. Great libraries had come upon the American scene. Some remarkable librarians had created most of the essential concepts and policies for library administrative methods. Collections began to grow rapidly, with a great deal of attention necessarily given to cataloging and classification. The year 1876 was momentous in that the American Library Association was formed.[1] The *American Library Journal* was founded with four of its twenty-one associate editors "leading the profession" from university libraries. The Library Bureau was established as a supply house providing a major force toward

standardization. It also was the year in which the classic volume, *Public Libraries in the United States of America; Their History, Condition and Management,* was published by the United States Bureau of Education. One looks in vain, however, in that major volume of 1,187 pages for any statement regarding cooperation among academic libraries.

Cooperative cataloging was one of the very first interests of the new library association. A committee was formed to devise a plan for continuation of Poole's "Index to Periodical Literature," and another committee tackled the matter of standardization of cataloging. Several articles in the *Library Journal* discussed plans for cooperation in indexing and cataloging. Yet it was a Committee on Cooperation in Indexing and Cataloguing College Libraries, which was appointed August 1876, that is significant with respect to academic cooperation. It was formed by the librarians of the University of Rochester, Cornell University, Vassar College, Syracuse University, and the New York State Library. This committee presented to the University Convocation of the State of New York in July 1877 a substantial report which called upon college libraries to speak out on any special adaptation of the cooperative cataloging movement which was required for their special wants:

> At present the work is chiefly in the hands of the public libraries. . . . In making this report your committee do not wish to be understood as endorsing fully all the methods proposed by the committees of the Library Association. It is very doubtful whether as good cataloging can be done, in the manner proposed, by a considerable number of libraries, even under very explicit rules, as might be expected of one or two experts, who should work for pay under the general direction and criticism of the committee. Cooperation can be secured quite as effectively by a combination of capital as by a combination of labor. In such an enterprise *the first most important thing to be aimed at is perfection of work.* . . . Other points might be mentioned but a review of the methods proposed is not the object of this report. We believe that it will be far better for us to work with the Library Association, though we may differ in opinion as to some details, than to undertake any separate work in this state.[2]

The decade of the 1890s witnessed the beginnings of major national programs of academic library cooperation. It did not come unannounced onto the scene. There had indeed been discussions over several previous decades, at least since 1851, and no doubt there may have been a large number of local arrangements of such cooperation. In 1898 the librarian of the University of California announced willingness to lend to other libraries that would lend to the University of California.

In January 1898 the American Library Association began publishing analytic cards as a shared indexing/cataloging program. The copy for these cards was prepared by five major libraries for articles in some 250 serials. The H. W. Wilson Company took over this analytic activity in June 1919 for incorporation into the *International Index of Periodicals.*

Into The Twentieth Century

In another consideration, the librarian of Princeton University, Ernest C. Richardson, proposed in the spring of 1899 "a lending library for libraries" and suggested that this might be the Library of Congress or an independent organization.

The Library of Congress issued a policy governing interlibrary loans in 1907 and lent to such an extent that by 1909 it loaned 1,023 volumes to 119 libraries —including forty-nine academic libraries which accounted for half of these loans. An ALA interlibrary loan

code was first published in 1916.

If a union catalog of holdings is permitted within the definition of cooperation, there were then major developments, notably so in the first decade of this century. The first regional union catalog was created in 1901 at the California State Library. After first being limited to periodicals, it was soon enlarged to cover all nonfiction. The National Union Catalog was established in 1900. In November 1901 the Library of Congress began selling copies of its printed catalog cards as well as galley proofs of these cards. During the winter of 1901–02 it began the donation of complete "depository" sets of cards to certain libraries. Some libraries receiving these began immediately to file them into their public card catalogs, thus constituting union catalogs. The University of Chicago Library from 1913 and the Harvard College Library from 1911 published printed cards, the scope designed to supplement LC and complement each other. Chicago distributed its cards from 1913 until 1917. (When Chicago began distributing its cards May 2, 1913, those titles also owned by Harvard, about 30 percent, appeared with the symbol "UCL–HCL.") The University of California issued them from 1915 to 1917. In July 1918 the University of Chicago began publishing analytic cards for certain European serials. The University of Michigan published for some time after 1924; the University of Illinois started in 1926. Wesleyan University published cards sold to thirty-two research libraries from 1934 until World War II. The Library of Congress established its Cooperative Cataloging Division in 1932.[3]

Another cooperative endeavor is that of joint acquisition programs. Perhaps the earliest example is the 1913–14 South American buying trip to eleven countries by Walter Lichtenstein, the Librarian of Northwestern University. He acquired 9,000 volumes plus newspapers and a few manuscripts on behalf of Harvard University, Brown University, Northwestern University, the John Crerar Library, and the American Antiquarian Society. One or two features of this joint effort are of note:

> In Venezuela and Bolivia and partly also in Brazil the purchases consisted of collections which had to be divided among the cooperating institutions, and naturally included a fair amount of material which, either because the cooperating institutions already had it or because the class of material in question is not collected by the institutions which I represented, can be sold to other libraries in this country. The purchase of collections on joint account in this manner was a new experiment. It did not seem to me to be wholly satisfactory. The chief difficulty was that the material could not be readily divided until my own return to this country, with the result that no one knew until I did return how much each institution was liable, and hence I was considerably hampered in making further purchases. As it finally turned out, one institution acted to a large extent as banker for the other institutions, which evidently is pleasant enough for the latter, but is not quite fair to that institution which has the misfortune to be the banker. . . . When the collections came to be divided it was soon felt that the only possible way to divide the cost among the institutions interested was to devise a system of points. A pamphlet was counted as one point, an unbound volume as four, and a bound volume as eight.[4]

It seems quite certain that the increase in publishing in the 1850s and the economics surrounding the Civil War brought an end to the common practice of publishing library catalogs periodically in book form. It also thereby hastened the adoption of unitary catalog cards which during the last quarter of the nineteenth century became the prevalent mode for listing

holdings and facilitated sharing of bibliographic data. If the more affluent times of the 1880s and 1890s resulted in phenomenal growth of collections, it may have been predictable there would be an upsurge in cooperative proposals and the beginning of national cooperative programs.

Despite the 1927 publication of the great *Union List of Serials in Libraries of the United States and Canada,* it would seem that the decade of the 1920s was not a period of new concepts in academic library cooperation. With the crash of 1929 and conditions of the Great Depression, however, there was impetus for cooperation which led to new programs of which a few among academic libraries may be cited.

Dozens of new union card catalogs were begun in the 1930s, stimulated by the vast federal relief program. One result was the 1940–41 survey under the sponsorship of the ALA Board of Resources of American Libraries which recommended their future coordination to assure thorough coverage, minimum overlap, and sound fiscal support.

As a predecessor to cataloging-in-publication and the National Program for Acquisitions and Cataloging (NPAC), the Cooperative Cataloging Program began in 1932. Within ten years nearly 400 U.S. and Canadian libraries contributed data for 60,000 scholarly titles for LC editing and publication.

An informal arrangement among several institutions constituted the Cooperating Libraries of Upper New York, CLUNY. Formed in 1931, it included Buffalo University, Colgate University, the Grosvenor Library, Hamilton College, Syracuse University, Cornell University, and Union College. This group functioned until 1939 as a clearinghouse for mutual problems and cooperated on a union list of periodicals and the joint purchase of microfilm of early English publications.

An example of a formal agreement is the Duke University and the University of North Carolina interlibrary project. In 1931 these two institutions agreed to special book collecting areas, and the libraries exchanged author cards for their catalogs. Four years later a messenger service commenced. Two other North Carolina institutions joined in 1955, and full borrowing privileges were extended to all members of each institution.

An example of contractual arrangements among several libraries is the Joint University Libraries founded in 1936 by Vanderbilt University, George Peabody College, and Scarritt College for Christian Workers. Operating under a joint board of trustees, the facility is an independent entity, jointly owned and financed by the participants.[5] Another example is The Claremont Colleges library system which began in 1931 when a contractual arrangement among the Claremont Graduate School, Pomona College, and Scripps College established a joint order and catalog department to serve the three libraries.

A 1933 example of an arrangement for reciprocal borrowing privileges is the Atlanta University Center Corporation in Atlanta, Georgia. With an initiating grant from the General Education Board it included Atlanta University, Morehouse College, Spelman College, Morris Brown College, Clark University, and in 1957 the Interdenominational Theological Center.

Another variation of interinstitutional cooperation is the unification of academic libraries under state control. This was pioneered in 1932 by the Oregon State Board of Higher Education which appointed one director of libraries for the entire state system and established the principle of free circulation among all state institutions. It also set up a central order division which now takes the form of a combined author list of all books and periodicals in the state

system maintained in the Order Department of the Oregon State University Library "to eliminate unnecessary duplication of materials."[6]

More Recent Events

A highly selective list of other cooperative programs of the past forty years would include the following:

1942—Opening of the New England Deposit Library (NEDL) as a cooperative storage facility of Boston College, Boston University, Harvard University, M.I.T., Radcliffe College, Simmons College, Tufts University, and four nonacademic libraries.

1944—The Cooperative Committee on Library Building Plans initiated by President Dodds of Princeton to concern itself with common problems in the planning for and design of academic library buildings.

1946—The Cooperative Acquisitions Project for Wartime Publications conducted by the Library of Congress which, over three years, shipped nearly a million volumes from Europe to 113 participating American libraries.

1948—Formation of the Universal Serial and Book Exchange, Inc. (previously named the U.S. Book Exchange). Of the initial members, 106 (76 percent) were college or university libraries; they continue to deposit about 70 percent of the material exchanged, and they receive about the same percentage of the total distributed.

1948—Start of service under the Farmington Plan to about sixty research libraries of a coordinated foreign acquisition program for current materials of research value—a cooperative program born of disconcerting experiences with European acquisitions during and immediately following World War II. This major cooperative program was one of the most effective and significant over many years. With 1965 as an example, fifty-two libraries acquired 22,419 volumes, constituting the total research publications from fourteen countries, in addition to area assignment receipts from the less-developed countries.

1951—Opening of the Midwest Inter-Library Center, later to be known as the Center for Research Libraries, by ten midwestern university libraries as a cooperative akin to the NEDL but with a program for joint buying and different categories of deposit or center ownership.

1956—Initiation of the Foreign Newspaper Microfilm Project as a cooperatively filmed, shared-positive-copy program managed by the Association of Research Libraries, the offspring of Harvard's duplicate sale program begun in 1938.

1959—The Latin American Cooperative Acquisitions Program (LACAP), begun as a commercial endeavor for about forty academic libraries.[7]

1961—Congress authorized expenditures under Public Law 480 of blocked currencies for acquisition and cataloging of multiple copies of publications from eight countries. Managed by the Library of Congress, this PL 480 program benefited over 300 academic libraries, with materials from Ceylon, India, Indonesia, Israel, Nepal, Pakistan, United Arab Repub-

lic, and Yugoslavia.

1965—The Medical Library Assistance Act, creating, among other programs, the eleven Regional Medical Libraries providing interlibrary loan and reference and consultation services to a broad region. Seven are located in universities: Harvard, University of Washington, Wayne State, UCLA, Emory, Texas, and Nebraska.

1966—The National Program for Acquisitions and Cataloging (NPAC), managed by the Library of Congress and initiated by the Association of Research Libraries.

1966—The New York State Reference and Research Library Resources Program (3Rs Program) established to facilitate use of research library materials.

1967—Incorporation of the Ohio College Library Center (OCLC) as a cooperative cataloging service for Ohio colleges and universities.

1968—The Center for Chinese Research Materials, formed by the Association of Research Libraries for acquiring, reprinting, and distributing selected valuable but inaccessible Chinese scholarly materials.

1973—The Research Libraries Group, formed of Harvard University, Yale University, Columbia University, and the New York Public Library, to undertake a program of coordinated collection building, reciprocal access privileges, delivery service, and a common computer storage of catalog records for their collections so as to enhance coordinated acquisitions and resource sharing.

The composition of programs for four cooperatives begun in the late 1960s may be cited as typical. The Five Associated University Libraries (FAUL) in New York (Buffalo, Rochester, Syracuse, Cornell, and Binghamton) currently includes assigned subject specialization for acquisitions, delivery service, photocopying, reciprocal borrowing, expanded interlibrary loan service, and joint research projects. The Librarians of the Council of Independent Kentucky Colleges and Universities encompasses twenty-one colleges active in joint purchase, assigned subject specialization, reciprocal borrowing privileges, expanded interlibrary loan service, and production of union lists and directories. The Middle Atlantic Research Libraries Information Network (MARLIN) of seven universities includes delivery services, photocopying, mutual notification of purchase, production of union lists and directories, expanded interlibrary loan, and special communication services. The North Dakota Network for Knowledge of seventeen college and university libraries plus thirteen public and special libraries includes all of MARLIN's program except purchase notification and also provides mutual reference services, reciprocal borrowing, and operation of a special bibliographic center.

One or two cooperative liaisons were formed every year or so from 1930 until 1960 when there was a sharp increase. The Delanoy-Cuadra directory lists the births: four in 1964; seven in 1965; eleven in 1966; sixteen in 1967; twenty-four in 1968; twenty-four in 1969; and at least nineteen in 1970.[8] If one had a comparable mortality list, one might speculate that some of these would falter. Yet a spot check found none of those listed as formed during the 1960s were deceased by 1975.

Short-Lived Efforts also Provide Lessons

Yet it must also be recorded that some

major attempts at cooperation among academic libraries petered out or failed, though much may have been learned. An evaluative history of library cooperation is faced with problems. Joe W. Kraus has written:

> Several difficulties present themselves at the outset. The literature of library cooperation is very large and most of the articles are uncritical. Although most of the cooperative enterprises of libraries are announced and described in some detail in library periodicals, there are few evaluative reports that give a clear account of the success of a venture and the factors leading to success or failure. Unsuccessful ones, in fact, simply seem to fade away. Costs of a cooperative effort are particularly hard to ascertain, in part because many expenses are absorbed in the participating libraries, and in part because standard reporting procedures have generally not yet been developed.[9]

One may here cite the Columbia-Harvard-Yale medical library computer-based cooperative cataloging program that was terminated after operating from 1963 to 1966. As stated in the research proposal issued in December 1962 from the Yale Medical Library, the objective of the project was to test the feasibility of using a computerized catalog to provide rapid and improved information services in medical libraries. An on-line system was projected; the significant achievements were the recording of 23,000 titles and the automated production of catalog cards. (It was the precursor of OCLC.) An array of technical problems concerned input procedures. A change in data format standards was needed. Authority files were lacking. The subject treatment caused great problems, as did error-detection procedures. There were problems of staff cooperation and communication.[10] Operational methods among the three participants varied widely, and detailed documentation of procedures and decisions was lacking. Furthermore, "it had become apparent that a latent conflict of purpose had begun to form between the interests of the inter-institutional Project comprising divisional, i.e., medical libraries, and the interests of the individual university library systems where the medical library is but one of the integral units."[11]

Another which did not last long was the Colorado Academic Libraries Book Processing Center, which also operated for only three years. This Colorado project began in 1965 with nine academic libraries. The test phase, operated for fourteen institutions, lasted from early 1969 until 1973 and covered the full range of acquisitions, cataloging, processing, and bookkeeping. Its problems were incompatibilities among library procedures; changes not made by all of the individual libraries; differences in size, traditions, and service philosophies; and failure to recognize that errors were inevitable. Turnaround time was below expectation and generally inferior to that obtained when libraries ordered direct from publishers or jobbers. Communication breakdowns accounted for many problems. Geographical separation of participants was partially to blame, and staff did not understand the center's role or how it would affect their jobs, future, and status. Furthermore, "centralization, cooperation, and computerization have created a library environment that is completely alien to many librarians."[12] Its final processes were phased out in 1973.

The most successful acquisition and processing centers, both founded in 1969, are the Cooperative College Library Center, Inc., in Atlanta, and the Massachusetts Central Library Processing Service in Amherst. From the latter, thirty-one institutions were provided acquisition support and cataloging; a million items have been processed by its batch computer process. Exceedingly low costs were achieved under con-

straints which constitute mass production methods. The program was successful in bringing public higher education librarians together in an organized way, which was timely since the Commonwealth Legislature eliminated funding for fiscal year 1976.

More often those cooperatives that were weak were merged into other programs, reduced to a smaller practical element, or superseded by a newer, larger, and more effective program. An example of a program which served its time is the Farmington Plan of 1948 to 1972 which was obviated as strength was gained by the National Program for Acquisitions and Cataloging (Title II-C of the Higher Education Act signed into law November 8, 1965). The PL 480 program was also a factor.[13]

Diversity in Recent Efforts

Academic library cooperation is clearly flourishing. After many experimental starts, there seem to have been persistent efforts since the 1930s. Such programs continued to grow in number and magnitude after World War II. It may indeed be asserted that the efforts since World War II have become more formal, more extensive, and far more expensive than previous efforts. Developments such as the New England Deposit Library and, particularly, the Center for Research Libraries demanded active participation and support by college presidents. A program such as the National Program for Acquisitions and Cataloging involved Congressional lobbying with resultant major appropriations and sweeping impact. The formation of the Ohio College Library Center demonstrated that cataloging operations could be effectively supported daily through on-line access to a single computer system. Formation of the Research Libraries Group indicated that not only the libraries of OCLC but also the largest academic and research libraries in the nation found the need and the means for a major effort involving a legal instrument, highly expert professional staff, fund-raising programs, and locally contributed effort.

The more prevalent existing programs found among 125 consortia (of which 60 percent were incorporated) may be tabulated as follows:[14]

reciprocal borrowing privileges—97
expanded interlibrary loan service—80
union catalogs or lists—78
photocopying services—72
reference services—50
delivery service—44
mutual notification of purchase—40
special communications service—35
publications programs—34
catalog card production—34
other cataloging support—33
joint purchasing of materials—30
assigned subject specialization of acquisitions—28

Quite clearly there are few completely innovative programs. An effort like the Research Libraries Group contains elements from a number of programs of the past forty-five years. In his recent article, "An Historical Look at Resource Sharing," Basil Stuart-Stubbs concluded:

> If the word *network* wasn't prominent in the vocabulary of our pioneers, the concept was there. In fact, although the centennial of Samuel Swett Green's proposal for interlibrary lending will be celebrated next year [i.e., 1976], and although the dimensions of cooperation among libraries have increased enormously, there have been few intellectual innovations in the interim years. Wherever the spirits of our predecessors now abide, they must be waiting for the realization of their ancient hopes.[15]

Just as there are few completely novel twists to academic library cooperation, so also one can find little novelty in the impetus for and obstacles to cooperative programs. Joseph Becker has cited the

motivating factors of service, economics, and technology.[16] John P. McDonald expanded these to include financial constriction, cost sharing, availability of funds, pressure of numbers, resource improvement, service improvement, management improvement, image enhancement, and technological development. To these nine forces urging cooperative enterprise, he has also cited a number of obstacles.

> If there are incentives to cooperation, there are also many problems and difficulties that limit or frustrate our best efforts at collective action. There is, for example, a persistent attitude that assigns cooperative activities low priority and low or no budget. This viewpoint insists that cooperation be undertaken as a part-time extra duty and then only after more important work has been accomplished. There are other attitudes that have proved difficult to overcome. It is asserted that cooperation causes delay and inconvenience resulting in a general deterioration in service. Other complaints are that cooperation is expensive, that it involves high effort for low return, that there are inequities in contributions and benefits, and that cooperation is often ill defined or redundant.[17]

These problems may be endemic with any cooperative program—less visible where cooperation between two departments of a single library is concerned but exposed to view and psychologically much more difficult to resolve when cooperation between two institutions is undertaken. When one remembers that almost any two institutions are disparate in program, financial support, and a host of other variables, one may wonder whether any cooperation can be effective and lasting.[18]

The challenges, the opportunities, and the problems do not seem to change fundamentally with the passing of time. This may be true even for technological development. In 1851, three years after Charles C. Jewett left Brown University to become Librarian of the newly established Smithsonian Institution, he proposed the stereotype printing of cataloging data.[19] However, the spirit of cooperation was blunted by the difficulties of organizing the business and the unexpected warping of the plates. The Library of Congress card distribution plan of fifty years later pursued this same promise of a new technology which could solve problems of individual libraries.

Historical Lessons

The relative impact of these obstacles will change with respect to each cooperative endeavor. Furthermore, each endeavor is commonly a mix of several incentive factors and must cope with a variety of obstacles.[20] What can be concluded from this review of cooperative programs over the last century?

In 1945 an assessment was made by Robert B. Downs. His study revealed

> certain important principles which have influenced the success or failure of various kinds of library cooperation. First, distance is a handicap, and it is easier for libraries not too far removed from each other to work together. Second, regional library cooperation has its greatest opportunities in those areas with inadequate book resources. Third, libraries should not be asked to give up anything but rather to assume positive responsibilities and receive direct benefits. Fourth, agreements must be flexible enough to provide for expansion and adjustment. Fifth, complete elimination of duplication between libraries is not possible or desirable. Finally, only a comparatively limited number of libraries are at present equipped to make any substantial or effective contribution to a general program of cooperation on the research level.[21]

A university president provided another assessment.

> It is my personal judgment that those that work best are of two sorts: they are either between universities, or parts of universities, of equal status and quality or, at the other extreme, between universities, or parts of universities, that differ widely in status or quality. . . . But where the gradations in quality are small in extent but noticeable, co-operation is exceedingly difficult. . . . the obstacles to co-operation are not material. . . . [They] are found in the mind and spirit of man. They are institutional pride and institutional jealousy. . . . They are inertia and complacency. It is self-satisfaction, institutionwise, that makes the building of effective co-operation a difficult thing. And I would say, finally, that it is an irrational provincialism or an emotional particularism on the part of college faculties which makes co-operation difficult.[22]

To some extent there are cycles of popularity. Within a decade after the New England Deposit Library was opened, the Center for Research Libraries and the Hampshire Inter-Library Center came along, soon followed by local storage facilities for Princeton University, the University of Michigan, and the University of California at Berkeley. At the moment, computer-related programs are clearly looked upon as holding great promise. They are the prime, but not the only, objective of consortia such as NELINET founded in 1966, SOLINET (1974), MIDLNET (1974), and CLASS (1976). For instance, MIDLNET, the Midwest Region Library Network, includes research libraries and state networks in Michigan, Indiana, Wisconsin, Minnesota, Illinois, Iowa, and Missouri; it aims to develop faster delivery of books to users; to coordinate library planning, development, and research in the Midwest; to attract federal funds available for regional library network development; to provide a voice in the emerging national library network; and to develop a coordinated program of materials preservation. Each of these programs rides some wave pattern of popularity and success. Each individual library tries its ability to swim in the current, but none operates apart from circumstances in its own institution. Library changes can be found to be closely derivative of their institutional conditions and/or national circumstances.[23]

The cause and effect can sometimes be clearly traced. For example, projects supported by the Library Services and Construction Act Title III (signed into law July 1966) for intertype cooperatives obviously show derivation from that federal law. One can cite the 1972 Cooperative Information Network in California which was formed of 250 libraries, including the University of California campus at Santa Cruz, the Universities of Santa Clara, San Jose State, Golden Gate, and Stanford together with over a dozen community colleges and the U.S. Naval Postgraduate School. Yet the New England Deposit Library was born of space problems mounting during the depression years, although the concept was proposed by Harvard's President Eliot. In the fall of 1901, Eliot wrote that

> the increasing rate at which large collections of books grow suggests strongly that some new policy is needed concerning the storage of these immense masses of printed matter. . . . It may be doubted whether it be wise for a university to undertake to store books by the million, when only a small proportion of the material stored can be in active use. Now that travel and sending of books to all parts of the country has become cheap, it may well be that great accumulations of printed matter will be held accessible at only three or four points in the country. . . . The unused might be stored in a much more compact manner than they are now, even in the best-arranged stacks.[24]

The concept is venerable, but it had to await implementation until the massive

Widener Library was full in the 1930s. Then the New England Deposit Library was justified and financed.

Timing is often key, as with the NEDL. The Center for Research Libraries was initiated under the name Midwest Inter-Library Center. But ten years before its foundation President Robert M. Hutchins of the University of Chicago asked Keyes D. Metcalf to conduct a study of such a cooperative facility for twelve Midwest universities stretching from Ohio to Minnesota and Michigan to Missouri. Eleven of the twelve university presidents approved the idea, and only one was opposed. However, eleven of the twelve librarians opposed the idea, and only one approved of it. Metcalf suggested the matter be put off until after the approaching war. When a new study was then made, it turned out that all but one of the librarians had changed and all but one of the presidents had retired. Eleven out of twelve current incumbents of both groups then approved. Thus can ten years change attitudes toward interlibrary cooperation.

Recent cooperative examples face most if not all of the problems treated above, develop under similar motivations, and seem to follow principles influencing their success which are the same as similar programs of past decades. One significant difference seems to be the greater legal and administrative formality required. In this connection, it may be useful to review the purposes for creation of the Center for Research Libraries, the Ohio College Library Center, and the Research Libraries Group. These may be typical of the next significant wave of developments.

Examples of Increased Formality

The Center for Research Libraries was incorporated in 1949 by ten universities as a nonprofit corporation with the primary purpose of increasing the library research resources available to cooperating institutions in the Midwest. Four areas of activity were initially outlined:

> The deposit into a common pool of the infrequently used library materials held by the participating institutions in order to reduce their local space needs, and also to make more readily available when needed more complete collections than any one of the participating libraries itself could reasonably maintain for its own exclusive use.
>
> The cooperative purchase and centralized cataloguing and housing of infrequently used library research materials that were not already adequately available to the participants.
>
> The centralized acquisition and cataloging [sic] of the materials acquired by the participants for their own collections.
>
> The coordination of the acquisitions of the individual participating libraries to avoid unnecessary duplication.[25]

A building for the center was occupied in 1951. Within a dozen years the cooperative acquisition program had been given increased emphasis. The most significant shift came in 1963 when the center invited Stephen A. McCarthy and Raynard C. Swank to survey the program and make recommendations dealing with concerns such as the gradual assumption of many characteristics of a national interlibrary center while its base of support was primarily regional; questions of whether the center's activities were truly worth their cost to the members; how it could be of better service to all of the nation's research libraries (and potentially of Canada and Mexico as well); and how it might most effectively broaden its base of support. The most significant recommendation was that:

> The Center should formally cease to be a regional agency and should become a national institution.

> All suitable methods of bringing about this change should be fully explored.
>
> In seeking the best means of becoming a national research library center, the possibility of a relationship with the Association of Research Libraries and contractual relationships with the Library of Congress and other federal agencies should be thoroughly investigated.[26]

Among many recommendations and changes in the acquisition program, this change to a national scope and alterations of its governance, funding, and operations have been especially significant, and have led to an increase in its membership from the original ten universities to a present total of sixty.

The Ohio College Library Center was incorporated in 1967 by nine public and private colleges and universities as a not-for-profit corporation. There were fifty-four members during 1967–68. The OCLC Articles include the statement that:

> The purpose or purposes for which this corporation is formed are to establish, maintain and operate a computerized, regional library center to serve the academic libraries of Ohio (both state and private) and designed so as to become a part of any national electronic network for bibliographical communication; to develop, maintain and operate a shared cataloging program based upon a central computer store; to create, maintain and operate a computerized central catalog (inventory) of books and journals in the participating libraries; and to do such research and development related to the above as are necessary to accomplish and to extend the concept.[27]

That same year the OCLC trustees approved a general statement of two principal goals for the organization:

> These goals are, 1) increase of resources for education and research to faculty and students of its member institutions, and 2) the deceleration of per-student costs in its member colleges and universities. Techniques for achieving these goals include library and the new library-like information servicing techniques, such as dial-up installations, audiovisual centers, and computer assisted instruction. Although "academic libraries" of the immediate future must be looked upon as including all of these activities, only the traditional library is presently common to all institutions which are OCLC members. Therefore, major emphasis in planning and development will continue to be for activities associated with classical library operations. However, OCLC will stand ready to participate in newer information servicing activities, and it may well be that furnishing powerful computation service will be among its earliest activities.[28]

In 1974–75, participating libraries cataloged 2,555,055 books; the data base contained over 5.3 million locations. Cataloging using existing records in the on-line catalog increased to 84.7 percent. Use of records for catalog production by libraries other than the one inputting the record rose to 41.8 percent. This indicates a major operational interlibrary endeavor.

The Research Libraries Group was formed by Columbia, Harvard, and Yale Universities and the New York Public Library to develop a common bibliographic system, cooperative acquisitions, shared resources, and a program of book conservation. The presidents of the three universities gave their strong endorsement to the RLG concept, and the Trustees of NYPL demonstrated their support by voting in October 1974 to allow materials from the research libraries to be sent to other RLG members on interlibrary loan. The Research Libraries Group is governed by a board of directors with working committees on policies and programs for preservation, collection development, serials, readers services, bibliographic pro-

cesses and control, and systems and technology applications. It has created a joint bibliographic center and appointed a president and vice-president for systems. It was incorporated in December 1975 as a not-for-profit corporation. The certificate of incorporation presently includes the statement:

> The nature of the activities to be conducted, or the purposes to be carried out by the corporation, are as follows: (a) to promote coordination in the development of library collections, and to develop cooperative programs in the conservation and preservation of library materials; (b) to develop improved methods for identifying and locating recorded information in libraries and for creating and using bibliographic systems; (c) to develop, operate, support and coordinate cooperative programs to improve physical access to the collections of libraries; (d) to improve the efficiency and to promote economics in the operations of libraries; (e) generally, in any and all lawful ways to improve library services provided by the Members; and (f) to engage in any other lawful act or activities (consistent with the foregoing purposes).[29]

In its first report to a supporting foundation, the RLG restated that rapid development of a limited number of cost-effective programs is viewed as the basis for eventual solicitation of other members similar in nature to the founders and possibly selling services on a cost-recovery basis to other libraries.

Assessments of Usefulness

How useful are existing cooperative programs from the point of view of the college or university student or professor? One finds little data that can help in the evaluation. It may be worth noting that there have been almost no published research studies comparing and analyzing two or more cooperative programs of a similar nature.[30]

A tabulation of cataloging copy contributed to the National Union Catalog indicates records which constitute interlibrary loan potential for other institutions as well as potential shared cataloging. In 1974–75, academic libraries contributing the largest number of cards were the following:

University of Texas	124,209
Harvard University	113,830
University of Wisconsin	105,386
Cornell University	97,494
University of California, Berkeley	83,213
Yale University	78,230
Rutgers University	76,277
Princeton University	74,353
Columbia University	68,751
Duke University	67,795
Indiana University	66,548
Ohio State University	66,060

Since universities use LC cataloging for from 35 percent to 89 percent of their material, the value of help via NUC, MARC, NPAC, and other LC Processing Department products is clearly in the tens of millions of dollars.

Statistics of interlibrary lending and borrowing are evidence of the value of one universal cooperative program. Using a sample of academic libraries, the picture for 1974–75 is shown in Table 1.

Of all recorded circulation, the interlibrary traffic constitutes an almost infinitesimal proportion—an aggregate average of 1.79 percent for colleges and 1.33 percent for universities! It is the most expensive form of resource sharing. (It may cost 5 cents to circulate a reserve book, 10 cents from the general stack collections, $1.00 from a locked stack, $2.00 from a campus auxiliary stack, but it costs from $4.00 to $9.00 by interlibrary loan.)

Specific evidence is available of another type of program directly benefiting patrons—commuting service for persons to another library. An instance is the intercampus bus service estab-

TABLE I

INTERLIBRARY LENDING AND BORROWING AND TOTAL RECORDED CIRCULATION, SELECTED COLLEGES AND UNIVERSITIES, 1974–75

Name of Institution	Items Borrowed	Items Lent	Total Recorded Circulation
Colleges			
Amherst	1,826	2,424	62,092
Bowdoin	287	1,504	84,212
Colby	863	387	80,993
Denison	143	94	46,816
Goucher	23	17	44,262
Ithaca	559	600	105,421
Middlebury	1,430	1,206	89,358
Mills	22	45	41,906
Oberlin	1,408	2,751	290,386
Occidental	36	21	85,040
Reed	199	316	38,906
Stephens	16	5	61,264
Vassar	2,823	3,218	104,832
Weber State	379	50	87,840
Westmount	159	103	37,247
Wooster	459	98	48,739
Universities			
Delaware	3,301	2,953	394,022
Humboldt State	1,008	412	437,819
Illinois	4,427	43,729	1,882,960
Kansas	6,126	7,346	1,033,353
Long Beach, Cal. State	3,311	1,402	944,577
Michigan	5,910	8,939	1,565,148
Northwestern	1,311	3,653	1,014,701
Pennsylvania	2,612	9,079	545,293
Stanford	3,529	16,737	1,481,675
Texas	2,648	8,615	1,626,449
UCLA	4,006	14,695	1,933,268
Utah	4,549	5,693	549,463
Virginia	1,962	6,848	521,742
U. of Washington	3,349	53,055	2,792,968

lished in late 1961 by the University of California. Transporting scholars and books six days each week, it operates from Davis and Santa Cruz to Berkeley, and from Irvine, Riverside, San Diego, and Santa Barbara to UCLA. During 1972–73 there were over 16,000 passengers plus 35,000 complete interlibrary or returned personal loans. A study in early 1974 revealed half of the commuters used library services or collections; the others used laboratories, attended classes, or were otherwise on university business. Before making the trip, 19 percent had conferred with a local librarian about the resources to be visited, and 58 percent went with some preknowledge of what they would find. A third of the commuters checked out a book, the return of which by a later bus constituted a third of the above annual quantity of loans while the other two-thirds were interlibrary loans including the 9 percent personally fetched and charged out by the bus driver. Here is another quantifiable example of practical interinstitutional sharing of library resources.

One looks in vain in published library literature to find major comprehensive cost-effectiveness studies of joint acquisitions programs or interlibrary borrowing. To the patron they are relatively marginal programs when viewed against the totality of library services in any one college or university. Institutions have obviously recognized that the final 1 percent of service volume

justifies costs that are disproportionate.

The Nature of Future Prospects

It is difficult to discern trends. Interinstitutional cooperation seems to be universally recognized as essential, although the extraordinary efforts required and the hazards in the course are now understood—and continue to exist. In some sense a library is only effective if it has acquisition, processing, and service programs; physical facilities in which to house the collections and readers; and a specialized staff for these programs. Many but not all aspects of this library program are subject to interinstitutional cooperation. For those that are subject to a cooperative approach, nearly all types have been explored and are still being pursued. Where staff pressures increase, and as economic circumstances shift and technology develops, buffeted by institutional and national economic conditions, the movement for academic library cooperation advances on different fronts at different times. It seems, however, like an army moving ahead—the cavalry unit or armored tank unit, followed by foot soldiers, supply, communication, and management units, with no one getting far ahead of the others and no unit of the force long ignored.

The economic motive may not always be the eternal catalyst, yet it can be found in every one of the examples cited.[31] The financial resources used by libraries in their acquisition of materials and provision of service to users create economic environments. Whether they be in publicly or privately supported institutions, they respond to national changes in the economy and to local conditions. Programs have prospered with good fiscal support or have remained static due to inadequate economic studies or an insufficient financial base.

American academic libraries have reached a watershed that is almost as significant as the change from block printing to printing with movable type. This conclusion is based on the presumption that on-line computer-based operational programs constitute a radical and permanent change in cooperative style. When one is freed from most of the constraints of the card catalog, of the U.S. mail, and of locally prepared cataloging data, this adoption of sophisticated on-line computer-based programs may well be by far the most significant change ever achieved in library operations. It is a permanent change in the mode of library operations which should be accomplished during the period 1965 to 1990.[32]

It is not a sudden change, for it has its origins in the early 1950s; and, indeed, library programs using tabulating machines date from the mid-1930s. Yet if one looks ahead ten years, the college student of 1986 may well find at least 10 percent of all bibliographic citations of the library collections in machine-readable form accessible through a computer terminal; in some instances it may reach 100 percent. It is certain to include all of the more heavily used materials. The student will also be able via the terminal to call upon collections in other libraries, locally and nationally, and have instantaneous loan transactions, only constrained by copyright controls on photocopying and limited by telefacsimile or by the remaining need to send the text by air parcel post. Just as the development of national standards was important in 1876 and 1900, it again becomes of major importance in the nation's ability to develop a national computer-supported system of libraries.

This shift to on-line computer-based systems nationally linked will face the same type of problems as have been seen in cooperative examples cited above. After reviewing current experience with computerized library and academic resource-sharing networks, Pro-

fessor Lewis B. Mayhew concluded:

> It seems clear that the major problems to be overcome with respect to educational or research use of networks are not technical. Technical problems either have been solved or the directions established to solve them. The real problems are political, organizational and economic. Governmental policy must be refined so as to produce health and balanced growth rather than uneven and unplanned partial growth. Universities, by tradition independent, must find ways of reorganizing their uses of computers so as to optimize effectiveness and institutional autonomy. They need to mature to a point where they will trust external agencies. And as has been indicated earlier, stable, long-range systems of financing must be found.[33]

The economically forced and technologically facilitated cooperation of the 1970s must surely be resulting in just as significant a change in the libraries of the future as the political changes of 1776 created for the new American nation. The thirteen separate states operating independently then formed a federal government with careful orchestration of local authority, regional coordination, selected national standards, and some over-reaching federal programs. At the time the American Library Association was formed in 1876, the union of interests had recently been reasserted. There would seem to be a close parallel with the state of librarianship in this decade as it applies to cooperative programs among academic libraries.

References

1. An earlier move in this direction was the Librarians' Convention held in New York in 1853. "Proceedings," *Norton's Literary Register,* 1854, p.49–94.
2. "Co-operative College Cataloguing," *American Library Journal* 1:435–36 (August 1877).
3. Of historical use are the "Symposium on Printed Catalog Cards," *Library Journal* 36:543–56 (Nov. 1911), and the volume by Robert B. Downs, *Union Catalogs in the United States* (Chicago: American Library Assn., 1942).
4. Walter Lichtenstein, "Report to the President of Northwestern University on the Results of a Trip to South America," *Northwestern University Bulletin* 16:8–9 (Sept. 1915).
5. In this setting the Conference of Graduate Deans and Librarians resulted in *The Development of Library Resources and Graduate Work in the Cooperative University Centers of the South; Proceedings . . . Held at the Joint University Libraries . . .* , ed. Philip G. Davidson and A. F. Kuhlman (Nashville, Tenn.: Joint University Libraries, 1944).
6. A useful work is by Mildred Hawksworth Lowell, *College and University Library Consolidations* (Eugene: Oregon State System of Higher Education, 1942).
7. M. J. Savary, *The Latin American Cooperative Acquisitions Program; An Imaginative Venture* (New York: Hafner, 1968).
8. Diana Delanoy and Carlos A. Cuadra, *Directory of Academic Library Consortia* (Santa Monica, Calif.: System Development Corp., 1971). A second edition by Donald V. Black and Carlos A. Cuadra appeared in spring 1976.
9. Joe W. Kraus, "Prologue to Library Cooperation," *Library Trends* 24:171 (Oct. 1975). This issue is devoted to "Library Cooperation."
10. Paul J. Fasana, "The Collaborative Library Systems Development Project (CLSDP): A Mechanism for Inter-University Cooperation," in *Collaborative Library Systems Development* (Cambridge, Mass.: M.I.T. Pr., 1971), p.226–36.
11. Ritvars Bregzis, *The Columbia-Harvard-Yale Medical Libraries Computerized Project—a Review* (Toronto: 1966), p.4; see also specific comments on eleven major problems areas on p.17–19. See also Frederick G. Kilgour, "Basic Systems Assumptions of the Columbia-Harvard-Yale Medical Libraries Computerization Project," *Information Retrieval with Special Reference to the Biomedical Sciences; Papers Presented at the Second Institute on Information Retrieval,* ed. Wesley Siminton and Charlene Mason (Minneapolis: Univ. of Minnesota, 1966), p.145–54.
12. Richard M. Dougherty and Joan M. Maier, *Centralized Processing for Academic Libraries: The Final Report, Phase III, Jan. 1–June 30, 1969, of the Colorado Academic*

Libraries Book Processing Center—the First Six Months of Operation (Metuchen, N.J.: Scarecrow, 1971), p.119. See also Allen B. Veaner, "Colorado Academic Libraries Book Processing Center—Consulting Report," June 1972.

13. A useful review is James E. Skipper, "National Planning for Resource Development," *Library Trends* 14:321–34 (Oct. 1966); see also Robert Vosper, *The Farmington Plan Survey: A Summary of the Separate Studies of 1957–1961* ([Occasional Papers, no.77] Urbana: University of Illinois Graduate School of Library Science, 1965).
14. Carlos A. Cuadra and Ruth J. Patrick, "Survey of Academic Library Consortia in the U.S.," *College & Research Libraries* 33:271–83 (July 1972).
15. Basil Stuart Stubbs, "An Historical Look at Resource Sharing," *Library Trends* 23: 662 (April 1975).
16. Joseph Becker, "Information Network Prospects in the United States," *Library Trends* 17:311–12 (Jan. 1969).
17. John P. McDonald, "Interlibrary Cooperation in the United States," *Issues in Library Administration,* ed. Warren M. Tsuneishi, Thomas R. Buckman, and Yukihisa Suzuki (New York: Columbia Univ. Pr., 1974), p.131.
18. An extensive list of problems is presented by Merton W. Ertell, *Interinstitutional Cooperation in Higher Education; A Study of Experiences with Reference to New York State* (Albany: The University of the State of New York, 1957), p.98–100.
19. Charles Coffin Jewett, "A Plan for Stereotyping Catalogues by Separate Titles, and for Forming a General Stereotyped Catalogue of Public Libraries of the United States," *Proceedings of the American Association for the Advancement of Science* 4:165–76 (Aug. 1850).
20. A useful work is Ruth J. Patrick, *Guidelines for the Development of Academic Library Consortia* (Santa Monica, Calif.: System Development Corporation, 1971).
21. Robert B. Downs, "American Library Cooperation in Review," *College & Research Libraries* 6:407–15 (Sept. 1945, part II).
22. Ernest C. Colwell, "Inter-University Cooperation," *Library Quarterly* 22:2–3 (Jan. 1952).
23. In this connection, a useful work is Eileen Thornton, "Cooperation among Colleges," *Library Trends* 6:309–25 (Jan. 1958).
24. *President's Report for 1900–01,* p.30–31. See also *Library Journal* 27:53–54 (1902).
25. Quotations from Stephen A. McCarthy and Raynard C. Swank, "The Report of a Survey with an Outline of Programs and Policies" (Chicago: 1965), as reprinted in Michael M. Reynolds, ed., *Reader in Library Cooperation* (Washington, D.C.: NCR Microcard Editions, 1972), p.199.
26. Ibid., p.200.
27. "Articles of Incorporation of the Ohio College Library Center," approved July 6, 1967, third section.
28. *Annual Report* 1967/68, p.2–3.
29. From internal draft document, November 1975. Personal communication from James E. Skipper.
30. An exception is the study by H. Joanne Harrar of the NEDL, CRL, and HILC, summarized as "Cooperative Storage Warehouses," *College & Research Libraries* 25: 37–43 (Jan. 1964).
31. Note for example a product of the Association of Research Libraries: *Problems and Prospects of the Research Library* [papers and proceedings of the Monticello Conference], ed. Edwin E. Williams (New Brunswick, N.J.: Scarecrow, 1955).
32. Four seminal works may be cited as omens: (1) Conference on Libraries and Automation, Airlie Foundation, 1963, *Libraries and Automation: Proceedings,* ed. Barbara Evans Markuson (Washington, D.C.: Library of Congress, 1964); (2) Summer Study on Information Networks, University of Colorado, 1966, *Edunet: Report,* authors and eds., George W. Brown, James G. Miller, and Thomas A. Keenan (New York: Wiley, 1967); (3) Conference on Interlibrary Communications and Information Networks, 1970, *Proceedings,* ed. Joseph Becker (Chicago: American Library Assn., 1971); and (4) U.S. National Commission on Libraries and Information Science, *Toward a National Program for Library and Information Services: Goals for Action* (Washington, D.C.: U.S. Govt. Print. Off., 1975).
33. Lewis B. Mayhew, *Computerized Networks among Libraries and Universities: An Administrator's Overview* (ED 115220) (Stanford, Calif.: ERIC Clearinghouse on Information Resources, 1975), p.61.

David C. Weber is director of University Libraries, Stanford University, Stanford, California.

HENDRIK EDELMAN and G. MARVIN TATUM, JR.

The Development of Collections in American University Libraries

> Let no one connected with the promotion of graduate work deceive himself—no single thing is more important in advanced work, that really advances, than the literature of the subject, be it in the sciences, pure and applied, or in the humanities, impure and unapplied.[1]

With these words to the Association of American Universities in 1913, Guy Stanton Ford, dean of the graduate school at the University of Minnesota, underscored the close relationship between the quality of graduate education and research and the collections and services of the university library. This relationship is the dominant theme in the development of American university library collections.

Mr. Ford issued his 1913 warning not without justification. At that time graduate education in America had gone through a revolutionary childhood and adolescence. The Ph.D. degree had become an established standard and was well on its way to serving as "a prerequisite for teaching positions of professorial rank in higher education."[2] Some 150 institutions were already involved in graduate education at the turn of the century, but very few of them had library facilities that were even close to being adequate. Ford estimated that a collection of approximately 200,000 volumes would be needed as minimal support for a modest Ph.D. program. In 1910, only Harvard, Yale, Berkeley, Chicago, Columbia, Cornell, Michigan, Pennsylvania, and Princeton fell into that category.

Recognition of Library Needs

Reports about inadequacies and frustrations were numerous. The president of Columbia stated: "The university does not need or want books about sources, but the sources themselves."[3] And from Illinois: "I have had more people whom I have approached to consider positions at the university . . . decline . . . because of the lack of library facilities than for any other reason."[4]

Yet it should be recognized that during the previous forty years a true revolution had taken place in American higher education and in the university libraries. Prior to 1875, "productive scholarship in United States was not associated in any close or direct way with a career in college teaching."[5] America's transformation from a localized economic structure, characterized by artisan technology, into a self-generating national industrial economy accelerated rapidly after the Civil War.

The need for well-trained middle

management in the increasingly complex industrialized society became apparent, and when the waves of the new European scientific thought and methodology reached America, the foundations for the educational revolution were laid. "The explosion into a vacuum is basically the reason why the United States, starting its scientific revolution much later than Europe, was able to proceed more rapidly to parity and then to outpacing."[6] The system of electives, the seminar method of teaching, and especially the emphasis on research by the university faculty necessitated the establishment and building of library resources as an integral part of the university.

As Holley has indicated in his most useful description of the state of American college libraries around 1876, some of the libraries, notably Harvard, contained very valuable materials.[7] By and large, however, the collections consisted of gatherings of gifts that never added up to balanced and reliable coverage. The inadequacies of the nation's libraries for research were discussed repeatedly through the first half of the nineteenth century, and the situation had not changed much since 1850 when Jewett actually made a study of the sources cited in a number of important works on a variety of subjects. He concluded that it would have been impossible for the authors to have done their work with the resources available to them in American libraries of that time.[8]

Models and Methods for Developing Collections

Like the German model Ph.D., the inspiration as well as the experience for development of library collections serving research purposes came from Germany. Up to the eighteenth century the library at Wolfenbüttel had stood as the outstanding scholarly collection. Judiciously built over many generations, substantially with contemporary acquisitions, it contained significant primary and secondary published sources of European scholarship. It was the university library at Göttingen more than any other, however, that provided the link between academic programs and research libraries. Developed over some hundred years, the Göttingen library was considered in the nineteenth century the prime example of what could be achieved through careful planning and continued support. Christian Gottlob Heyne, its celebrated librarian from 1764 to 1812, summarized his concepts of academic collection development in 1810: "Proper selection rather than mere numbers of books is what makes real worth in a university library. Therefore, the uninterrupted, planned purchase of all important native and foreign publications produced by the development of knowledge is essential for a library with a scholarly plan."[9] The quality of the Göttingen library had a strong influence throughout Europe, and it became the standard for the new American universities.

From the very start until today, the use of a model, or a pace setter, has served as a strong force in the development of university libraries. The Astor Library in New York was undoubtedly the best scholarly collection of its time, and in many ways it set the standard for what materials should be available and how they should be made available. Willard Fiske, who came to Cornell in 1868, after several years at the Astor Library, wrote the president of the Board of Trustees in 1877: "The present situation of the University Library is really deplorable. I refer to the meagerness of its annual appropriation." After further describing in detail the deficiencies, he continued: "In a general way, too, the library is rapidly losing its relative rank among the college libraries of the country, and, within two or three years, will be outstripped by Amherst, Mich-

igan, Princeton, and other institutions."[10]

The newly acquired research-oriented faculty needed a good library, and it was that same faculty that set out to achieve this goal. Actively supported by university presidents such as Gilman (Berkeley and Hopkins), Eliot (Harvard), and White (Cornell), faculty members began to inventory their research needs, and book buying on an unprecedented scale began. The scramble to develop scholarly library collections on short notice brought about an all-out effort to acquire small and large private collections of books and journals built by scholars in a wide range of fields.

That method of acquisition, which began with such collections as the Ebeling (American history, Harvard, 1818) and Neander (church history, Rochester, 1853) before the Civil War, became a major factor in the growth of the then emerging university libraries. In the last quarter of the nineteenth century the outflow of collections from Europe had become such a torrent as to arouse the European scholarly community. In Germany concerned scholars in the field of German language and literature watched such major collections as the Scherer (Western Reserve, 1887), Zarncke (Cornell, 1893), Sauppe (Bryn Mawr, 1894), Hildebrand (Stanford, 1895), and Bechstein (Pennsylvania, 1896) make the one-way trip across the Atlantic. Articles and letters appeared in the press expressing alarm and calling for regulation of this traffic.[11]

Even in fields closer to home, such as Americana, it was the acquisition (usually by gift, but occasionally by purchase) of major private collections, such as the Jared Sparks (Cornell, 1872), John Carter Brown (Brown, 1904), Hubert Howe Bancroft (California, 1905), William L. Clements (Michigan, 1922), Tracy McGregor (Virginia, 1939), and William Robertson Coe (Yale, 1943), that added the depth to turn the recipient institutions into centers of research on the history of their own country.

In addition to this, the libraries began the effort to identify and systematically acquire the major scholarly sets and journals. These included the significant publications issued by governments, such as parliamentary proceedings, statistical yearbooks, and other official publications; the journals of the European academies many of which dated back into the seventeenth century; the monumental published compilations of historical documents; and major editions and standard literature in all branches of knowledge. Of prime importance were the scholarly and scientific journals reporting significant research output and, of course, the major bibliographical and reference tools. A great number of these books and journals had to be imported from Europe and, from an early date on, the larger libraries established invaluable relationships with agents and booksellers, such as the importing firms of F. W. Christern and Gustav E. Stechert in New York, and overseas agents including Edward G. Allen, B. F. Stevens & Brown, B. Quaritch, and H. Sotheran in London; F. A. Brockhaus, Gustav Fock, and Otto Harrassowitz in Leipzig; Em. Terquem in Paris; Martinus Nijhoff in The Hague; and Bjork & Börjesson in Stockholm. Their ready expertise and tradition of conscientious service were major factors in the development of the scholarly collections that were beginning to take shape. By 1897, some forty libraries were using the services of the German agent Harrassowitz. By the outbreak of World War I that number had risen to 120.[12] It is not difficult to imagine the effect of this tremendous buying activity on availability and, of course, prices of out-of-print and antiquarian books and journals.

American Scholarship and Collection Growth

American scholarship developed strongly in the last quarter of the nineteenth century. Fifteen major scientific societies were founded between 1876 and 1905. Among these were the American Chemical Society, the American Mathematical Society, the Modern Language Association, and the Geological Society of America. Increased specialization in scientific and scholarly disciplines changed publishing patterns. The traditional comprehensive treatment of a large subject field, the handbook, was replaced by the scholarly monograph describing one aspect, fact, or figure in a critical fashion. The need to publish reports of research generated the founding of a large number of discipline-oriented journals, many of which were sponsored by the newly founded learned societies. Among the most significant journals that came into being before the turn of the century were the *Botanical Gazette* (1875), *American Historical Review* (1895), *PMLA* (1884), *Philosophical Review* (1892), *Physical Review* (1893), and the *Journal of Political Economy* (1892).

The importance of systematically acquiring currently published material was only slowly recognized. Regular budgets did not really exist, and selection by faculty was in most cases haphazard. Even at Harvard there was some skepticism regarding journals: "The value of them is often in the main temporary, for the more important results are sure to appear sooner or later in the form of monographs. . . . We are constantly resisting the pressure to add new ones to our list, yet in spite of ourselves we are spending over a third of our income for periodicals and the publications of learned societies."[13]

Danton illustrated the quantitative development of collections by calculating the mean annual growth of seventeen university libraries:[14]

1850–1875—1,168 volumes
1875–1900—5,135 volumes
1900–1920—15,707 volumes

With estimates of the accumulated world book production in 1908 at some 10,000,000 books and 70,000 journals, it becomes obvious that the share held by even the major American libraries was, to say the least, still rather modest.[15] Examples have already been cited of user opinion on the quality of the collections. In 1912 Richardson's review of the holdings of European historical sources showed unsatisfactory and very unevenly distributed collections. Of a total of 2,197 titles, Harvard reported having 1,600 (more than there were in all other libraries together), and it was busily acquiring the rest. Yale was adding rapidly too, but only ten other libraries owned 10 percent of the list.[16] Even so, a survey of special collections published in the same year indicated pockets of remarkable research strength in a number of university as well as public libraries.[17]

University library collections by 1910 consisted of miscellaneous gifts, books bought in support of classroom teaching, collections of research materials, and special collections. The difference in quality between the libraries was, of course, determined by the mixture of these elements. The universities with the strongest graduate programs had developed the strongest libraries, and that early start has kept almost all of those libraries ranked among the best in the country.

Selection Policies

Money has always been the ultimate determining factor in the development of library collections, but planning concepts and selection practices are of almost equal importance. It is not surprising that in the transition period few

clear goals were set. In the established European tradition the concept of selectivity was held high. Only the "good" books and journals were allowed to become part of the collection. However, there has never been general agreement on what constitutes quality. Europeans emphasized comprehensiveness within the well-bounded realm of their concept of solid research materials. American librarians, on the other hand, from an early date regarded almost all printed material as potentially useful for research and, therefore, favored its gathering and retention.

There has been, and continues to be, running debate on this subject, with the result that in practice no real standards of selection have been applied to the book collections. It has thus been found virtually impossible to design a collection development plan, and a considerable discrepancy has developed between what might potentially be acquired and what actually was brought into the library. The discussion on the desirability of comprehensiveness led to the completely unfounded yet often recurring statement that university libraries can *no longer* buy all the books they need. In fact, at no time in American library history, including the 1960s, was it ever the case that the research libraries of the country could satisfy their appetite for books.

An important factor in the shaping of the collections was the almost complete control by the university faculties of book selection and the allocation of book budgets. Because of the varying specialized interests of faculty members, it has always proved difficult to balance a program of buying in support of immediate curricular needs with systematic long-range development of the collections of research tools. Immediate needs have tended to receive the lion's share of attention in those institutions with large numbers of students. Faculty involvement in library affairs has assumed an endless variety of formats, but by 1910 most institutions were governed by a library board, which exercised control over the book budget. The available funds were usually allocated to academic departments, and members of the departments were responsible for making purchasing suggestions. The librarian's role was to approve and place the orders, or, at best, to encourage or discourage faculty members.

Only at the largest institutions, notably Harvard and Yale, was the library staff seriously involved in the selection process, and there can be little doubt that this participation contributed substantially to the successful collection development programs at those universities. Yale librarian James T. Babb stated: "At Yale the Librarian has always controlled the book funds and they have not been allocated to the teaching departments. This makes for a more consistent acquisitions policy."[18]

Decentralization and Centralization

Another factor that influenced the book selection process was the decentralization of most university library collections. Following the example of the German institutes, the emerging universities of the nineteenth century developed a number of departmental libraries, many of them quite independent from the university library.[19] At Johns Hopkins and Chicago especially these departmental collections for some time held the most important library resources of the university. Since selection and buying were not coordinated, much duplication occurred, while costly purchases frequently could not be made because the funds were broken up into many small amounts.

The process of centralization has several aspects, including centralized administrative control, centralized processing (acquisitions and cataloging), and the physical merger of collections. A

campuswide union catalog has usually been one of the early benefits resulting from centralized control, and in most cases this has been followed by at least some degree of centralized ordering and cataloging.

Centralized administrative control has not been achieved easily within the larger and more complex institutions. At Harvard an abortive attempt was made in 1880 by Justin Winsor to centralize acquisition and cataloging, but it failed as a result of the absence of effective administrative control. Harvard's long tradition of separate financing, under the famous principle of "every tub on its own bottom," led to a proliferation of libraries and to the development of each along independent lines. Only with the appointment in 1910 of Archibald Cary Coolidge to the newly created post of director of the university library was a measure of coordination gradually achieved.

At Chicago central control over departmental libraries dates from the appointment of Ernest D. Burton as the first director of libraries in 1910, while at Berkeley a substantial measure of central authority was gained in 1911 by librarian Joseph C. Rowell and associate librarian Harold L. Leupp, with the backing of university president Benjamin Ide Wheeler. On the other hand it was not until 1961 that direction of the libraries of the endowed and state-supported colleges of Cornell was centralized under director of libraries Stephen A. McCarthy.

The persistence of departmental libraries can be credited in part to a widespread acceptance of the idea that the needs of particular groups of students and scholars can best be served by locating specialized library collections in close proximity to the departmental classrooms and laboratories. In part, however, they have developed as a response to the recurrent overcrowding that seems to be the inevitable lot of growing book collections.

Conversely, the erection of major library buildings has usually resulted in a consolidation of resources and services. In 1927 Chicago's associate librarian J. C. M. Hanson wrote:

> In 1902 the majority of the Faculty evidently favored a further development of the departmental system to which they had been accustomed since 1892. However, the situation has changed since then. Harvard, Yale, Johns Hopkins, Michigan, Illinois, Minnesota, Cornell, and other universities here and abroad have demonstrated or are demonstrating the fact that the modern central library is in a position, not only to provide most of the advantages of the departmental system, but to improve on them; to furnish better service at less cost, better care and supervision of books, better equipment, more and better reference books, and, last but not least, opportunities for that broadening influence which comes from contact with members of departments other than one's own.[20]

The decision to centralize the control of library operations has marked a turning point in the history of each academic library. It is almost unanimously agreed that administrative and later physical consolidation of library resources and services has increased efficiency in the expenditure of book funds and in processing costs and has greatly improved the utility of the university library as a research instrument.

Cooperation and Competition

From the turn of the century to date, the topic of cooperation between libraries in the development of their collections has been on the minds of university administrators and librarians. Princeton librarian E. C. Richardson made a strong plea in 1899 for a national lending library to alleviate the struggles of the nation's libraries in their effort to "cover the whole ground."[21] An

even stronger identification of the problem of competition was made by Guy Stanton Ford in 1912:

> At present, too many universities are buying without due reference to the neighboring collections. Four or five universities within a radius of a hundred to two hundred miles of each other in both eastern and middle western sections are bidding against each other, paying higher and higher prices for rarely used sets of which one or two in a section would by the courtesy of inter-library loans supply all needs. . . . I hesitate to name the universities whose libraries—irrespective of their faculties—furnish unrivaled facilities for studying Western history; the list of these, strong in the pamphlet and other source material of the French Revolution, is equally extensive. The next decade will see us bidding and building against each other for South American and Oriental history, politics and literature—not a selected country or period or phase—but all South American and the whole Orient.[22]

That was, of course, an administrator's point of view. Some local cooperative arrangements did work successfully. The joint approach by the University of Wisconsin Library and the State Historical Society Library has certainly been effective. The same is true for the coordination of selection between the University of Chicago, the John Crerar, and the Newberry libraries. However, faculty pressure to develop research resources locally prevailed; and, paradoxically, the real strength of most of the research libraries is based on the principle of competition.

Early Twentieth Century Achievements

Table 1 at the end of this article illustrates the steady growth of major university library collections during the first four decades of this century, with World War I understandably causing serious interruptions. The most remarkable experience for university libraries during the war was the expression of mutual faith between them and German booksellers. In the full knowledge that the war would come to an end sooner or later, libraries were reserving and holding book funds to pay for the materials missed during the war years. Booksellers, unable to ship materials to library customers overseas, were holding periodical issues for delivery (and payment) later. Libraries which were not so fortunate in their experiences, of course, had a lot of catching up when the war ended.

In general, higher education, graduate education, and especially scientific research grew rapidly. The number of students kept increasing, and the pressure on university libraries was strongly felt. By 1925 the number of institutions seriously involved in graduate education had risen to forty, and many more schools offered master's programs.

A substantial study of the situation in college and university libraries was prepared for the Association of American Universities in 1926.[23] Eighteen libraries were surveyed, a representative sample of older and newer institutions. It seems useful to pay attention to some of that survey's findings. The format of graduate education, notably the requirements for the Ph.D. degree, had crystallized, but there was a consistent pattern of faculty dissatisfaction with library collections in those institutions where graduate programs were relatively new. Libraries always trailed behind, and considerable frustration was reported from both sides. The more central role that the library was playing in higher education was reinforced by drastic changes in the methods for teaching undergraduates. The textbook was making room for the reading list; and the introduction of honors programs required a much broader choice of book and periodical collections. The division of

loyalties between support for teaching collections and for research collections characterized collection development in almost all the libraries surveyed.

> It is known that in many libraries very large numbers of the additions are duplicates for the reserved readings of undergraduates. It is also known that faculty members frequently mentioned the inadequacy of library resources for their researchers as well as those of their graduate students. . . . The inadequacies are due in some instances to a lack of funds but in others they result from the handling of purchases in a manner that is not designed to make readily possible the securing of the basic materials necessary for research.[24]

The allocation of funds to academic departments was identified as the main stumbling block. Only in a few cases, notably at Illinois, was a large amount of money available to the graduate school for the strengthening of printed resources for research. Once again, the larger, well-established universities experienced greater support for the continued development of the research collections because of faculty efforts. But as libraries grew larger, their ability (and sometimes interest) in developing special research resources diminished. "Evidence was found that in some instances the special collections had been established because of the indifference of the general library to the research and instructional needs of certain phases of university work."[25]

The interesting paradox, so characteristic of the large university library, is raised when the report recognized the value of these special collections, of government documents, report literature, archives, etc., but warned sharply that they should not develop without careful consideration of future growth, budget, staffing, and handling. "When ventures of this type are undertaken, the librarian and other administrative officers of the college and university should be taken into the counsels from the beginning."[26]

The more immediate problems of collection development in university libraries in 1926 clustered around an increasing volume of publication, rapidly rising prices, and a decreasing availability of older materials. In addition, attention was directed to "the much larger number of periodicals that are available and that members of the faculty consider essential to successful conduct of their work. Many instances were found in which science departments were obliged to use all of their allotment for library purposes to purchase the periodical literature that was regarded as necessary for the work of the department."[27]

Prices for a list of 633 periodicals received at Cornell increased 181.9 percent between 1910 and 1925.[28] The continuous buying of backsets of periodicals virtually depleted the market in Europe as well as in the U.S.[29] What did come on the market consequently became more and more expensive. Despite shortcomings and frustrations, significant additions were made to the nation's research libraries. An ALA survey of 1927 shows approximately 4,500 special collections. When compared with earlier surveys, there are represented a much wider variety of subject fields and a greater geographical spread.[30]

The Depression Years

William Warner Bishop wrote: "To anyone attempting review of the history of American libraries as a group it is apparent that their growth has been almost entirely individual, unplanned with reference to any other library or group of libraries."[31] This observation is certainly valid for the development of the collections in university libraries during the years of economic depression in the 1930s.

State by state, institution by institution, the experience was different. More

and more students came to the universities, more and more Ph.D.s were awarded. In most libraries acquisitions rates increased, but not enough to keep up with rising demands. "Extended and improved as they have been, the university libraries cannot keep pace with the demands made upon them by the ever swelling miscellaneous student body."[32] In addition, growth of research and teaching in the social sciences put new demands on libraries. The increased published output of primary data by government agencies required special attention. Virtually all the major libraries showed a decline in growth rate during the period between 1930 and 1933, but soon afterward the number of volumes acquired increased again.[33]

In the last decade before World War II the collections in the five oldest university libraries grew an average of 42.3 percent; the five youngest increased by 93.6 percent, a clear indication of the strong pressure on those libraries to provide basic resources for the growing graduate programs. Several institutions suffered severely during that period. Cornell and Johns Hopkins, of the older libraries, were forced to reduce their acquisitions rate. The rank order in size, deceptive as that may be, changed dramatically as a result of uneven funding. Figures 1 and 2 illustrate some of these differences for a selected group of institutions.

The application of microfilm technology had far-reaching consequences for research libraries during this period. It opened up research resources not previously available in individual institutions or, for that matter, in the country. Now manuscript materials and early printed as well as ephemeral material could readily be added to collections; and although not all librarians and professors were easily convinced, the active research community jumped at the opportunity. "There is very little question that photographic copying, whether by photostat for short articles or by film for longer ones and for books, is going to be the solution to many of the difficulties involved in building up competent research materials in our libraries."[34]

World War II

The independent and competitive development of university library collections has been criticized repeatedly for its waste of financial resources.[35] Another unfortunate dimension of this lack of national planning became apparent at the outbreak of World War II. The stepped-up research efforts, especially in war technology, revealed that a substantial number of important scientific books and journals from abroad had never been acquired by any of America's libraries. Renewed acquisitions efforts got under way, but when the Netherlands was occupied by Germany in May 1940, the supply stopped.

"Until the American entry into the War, many American libraries, working through a Joint Committee on Importations, which was particularly effective in dealing with British censorship, managed to obtain reasonably good coverage of European and Japanese journals."[36] Sometimes the British would hold up shipments for considerable periods. In 1941 the British released, only after intense negotiation, $250,000 worth of materials from Europe destined for nongovernmental libraries. The Library of Congress was authorized to purchase these materials for distribution, marking the first of a long series of actions by that agency in the procurement of foreign materials for research libraries.

Efforts to supply the various war agencies with needed books and journals were quite successful, through the work of the Interdepartmental Committee for the Acquisition of Foreign Publications.[37] Some of the material thus acquired reached university libraries in the form of photocopy or microfilm.

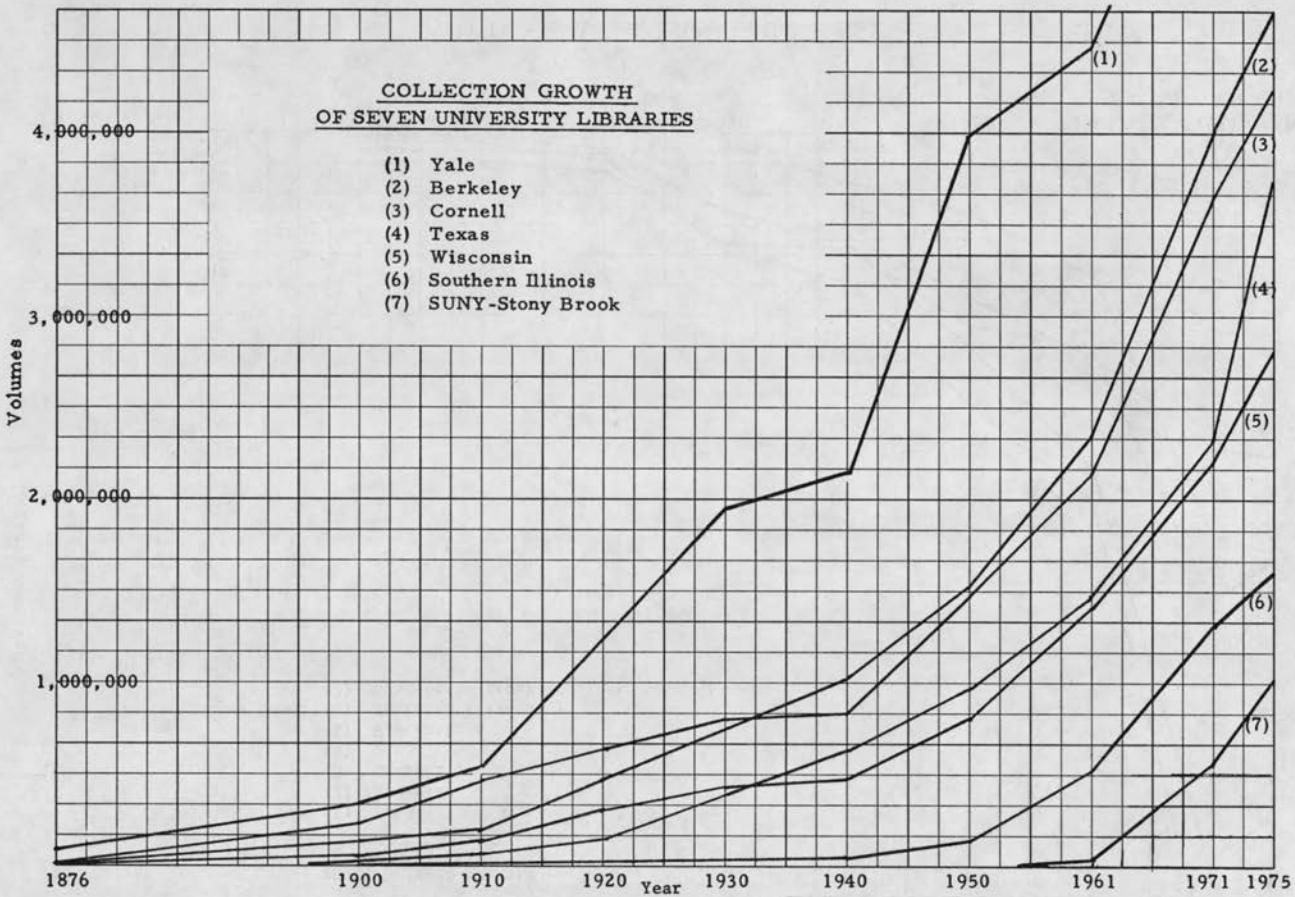


Fig. 1

Collection Growth of Seven University Libraries

Source: See Table 1.

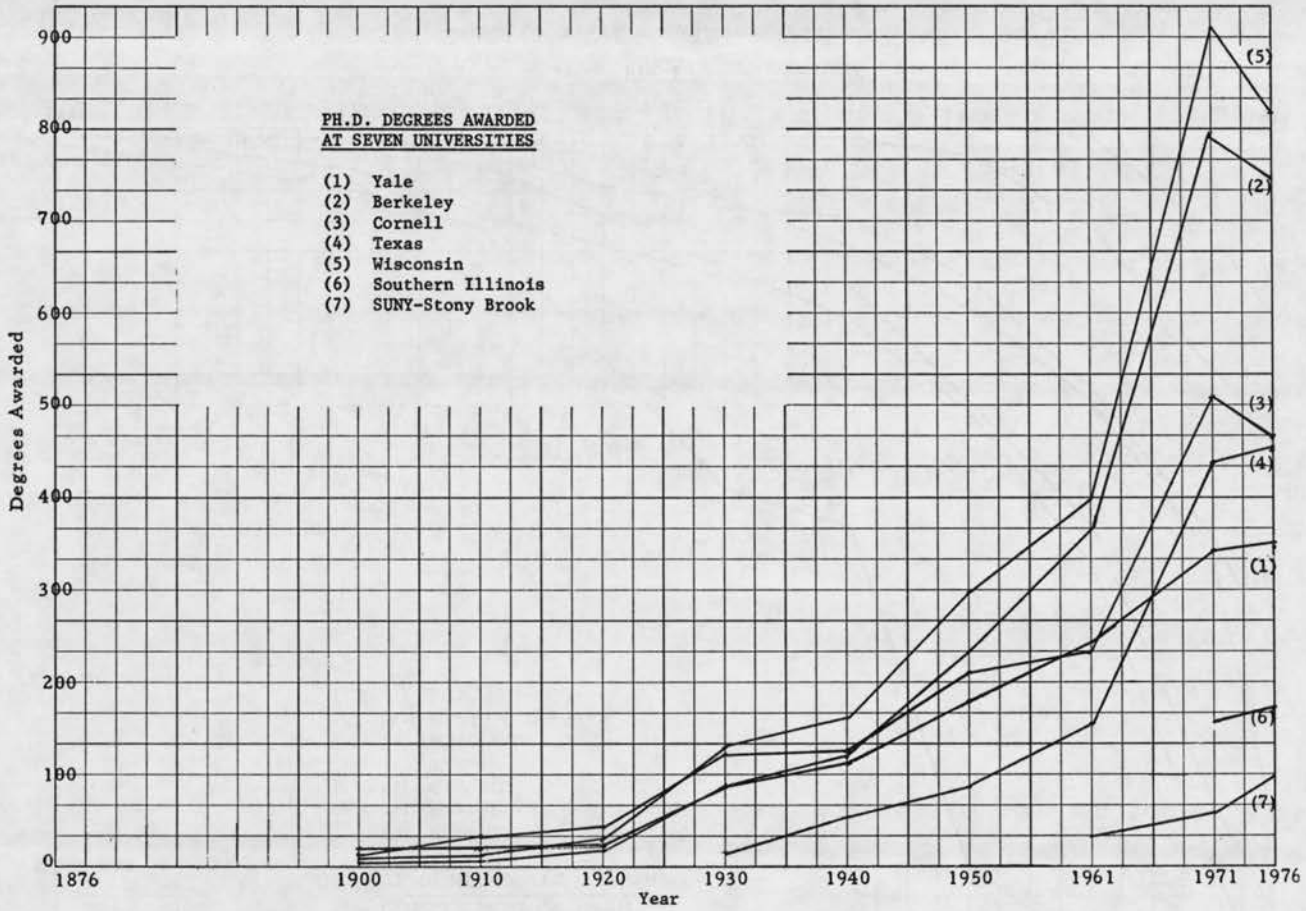


Fig. 2

Ph.D. Degrees Awarded at Seven Universities

Source: See Table 1.

But researchers needed not only wartime publications; there was a sharp rise in demand for backsets of significant German and other European scientific publications. With the supply lines completely cut off, various reprint programs were started in 1943 under the auspices of the Alien Property Custodian. These programs eventually provided current as well as back issues of 116 periodical titles and some 700 books from enemy countries.[38] Virtually all titles were in the sciences. The same program propelled several new companies into the mainstream of library suppliers. Among these were Kraus Reprint, Johnson Reprint, and University Microfilms.

In the same year, 1943, the Library of Congress was permitted to send a representative behind the troops in Africa and Italy and later in France to procure whatever materials were available. This, of course, did not help university libraries very much. The model, however, led to the Cooperative Acquisitions Project in 1945. The Library of Congress, with appropriate help from other government agencies, acted as European agent in purchasing wartime materials in many different countries. In addition, confiscated Nazi collections, printed war propaganda, and military "loot" were made available. A carefully worked out scheme of subject responsibilities and regional priorities allowed some 130 libraries to receive wartime imprints at only nominal cost. In total, over two million pieces were distributed, with the largest part being received by the Library of Congress, New York Public Library, Harvard, Yale, Columbia, Illinois, California, and Chicago.[39]

An especially successful accomplishment of the project was the negotiated release from Russian authorities of large quantities of serial issues held for American libraries by Leipzig publishers and booksellers. "This remarkable accomplishment, together with the general work of the project, made the World War II period one of the strongest, rather than one of the weakest periods in the holdings of American research libraries."[40]

The Postwar Period

There is a more than adequate and easily accessible literature describing the causes and effects, the facts and figures of the spectacular rise in American higher education after World War II and likewise of the apparent decline during the past few years. In many ways the table at the end of this article demonstrates these fluctuations. What is of interest here and has not as yet been so well covered is an analysis of the acquisitions of university libraries during the last quarter century. Such an analysis, however, is difficult because there is no satisfactory descriptive model for university library collections and their development.

Since the 1930s greater emphasis has been placed on current coverage of the scholarly book and journal production, as well as on the acquisition of official and semiofficial publications. Strong faculty involvement in the selection over a long period of years made the collections of most of the libraries clearly reflect the strengths as well as the weaknesses of American scholarship.

Prior to World War II this tradition was very much based on the Western European and Anglo-American experience. Other than the traditional classical studies of the ancient cultures in the Near and Far East, the rest of the world was largely viewed from the standpoint of European expansion. As a result, university libraries were almost wholly dominated by Western publications. The lack of information on non-Western areas became acute during World War II, when America's military and political efforts suddenly developed on a global scale. The demand for materials with current economic, geographic, linguistic, political, anthropological,

and sociological information on varied cultures and countries in Africa and Asia rose rapidly.

Area Study Programs

American power around the world generated demands for trained personnel in the postwar era, and the universities responded with vigor to the challenge. Area programs were organized at all major universities. With substantial help from the Rockefeller, Carnegie, Ford, and lately Mellon foundations, as well as from the government through the National Defense Education Act, professors and librarians began building collections in new fields. Chinese and Japanese books and journals were rapidly acquired, with emphasis on vernacular language materials. The cold war and especially Sputnik in 1957 stimulated the development of Russian language collections. Latin American interest increased; South Asia, South East Asia, Africa, the Middle East, and South Eastern Europe all required substantial attention. There were numerous selection, acquisition, and cataloging problems to overcome, and large investments in human resources became necessary to operate these library programs.

A very substantial part of the growth of the large research libraries may be attributed to area program-related acquisitions. The need for comprehensive coverage was obvious; the resources in countries such as China and Russia were not accessible to American scholars. In many other non-Western countries, no library programs for collecting and preserving printed materials existed at all. Within a very short period of time, America's universities developed library resources of unique depth and scope. Like earlier library developments, however, independence and competition were essential motivators. Only recently have the funding agencies attempted to concentrate their support on the most successful programs.

Throughout the postwar period the Library of Congress has shared its experience and expertise with other libraries. Using imaginative legislation, the Library of Congress started in 1962 a cooperative acquisitions program for India and Egypt under Public Law 480.[41] At various times the program operated in Israel, Pakistan, Ceylon, Indonesia, Poland, and Yugoslavia, depending on available funds. Some of these publicly funded programs have been followed by joint acquisitions programs in which individual libraries pay for their share. Some forty university libraries share in one or more of these programs.

Various other cooperative acquisitions programs have been or are effective. The commercially operated Latin American program was terminated in 1974,[42] but the Center for Chinese Research Materials, operated by the Association of Research Libraries, continues to be most effective in reproducing and distributing scarce materials. Efforts to coordinate the development of the various area programs nationally by "dividing up the world" among major universities have, however, failed. Only the natural selection through survival seems effective in eliminating weaker programs. Fears are increasingly being expressed that the leading academic libraries will not be able to maintain the strength of their unique resources, not only because of diminished outside support but because of fiscal problems within universities themselves.[43] As of this time, no solution is in sight.

European Materials

Surprisingly enough, interest in Europe has not developed in the same way. Traditional studies in history, literature, and the arts have continued to grow vigorously, but until recently there has been no substantial organized interest in the study of modern European societies. As a result, academic libraries

have not made as much of an effort to acquire the sociological, political, and economic literature originating outside the traditional publishing channels. Although a serious survey is long overdue, there is every indication that a large part of this "grey literature" has not been acquired systematically by any of this country's research libraries, with the possible exception of the Hoover Institution at Stanford University.

The frustrating experience with European publications during World War II led to the much heralded beginning of the Farmington Plan in 1948. Designed with severe limitations as to coverage, very complex distribution of subject assignments among libraries, and the absence of an adequate control mechanism, the Farmington Plan in reality served little more than a symbolic purpose.[44]

Soon after the war was over, university libraries reestablished relationships with European dealers, and before long, large selections of "trade published" books and journals were being acquired. Shortly after 1960 many of the larger libraries established blanket order programs with European agents. Coverage of these programs has been refined and broadened since the Library of Congress set up acquisitions offices in 1965 under the National Program for Acquisitions and Cataloging. During the past few years Europe has once again emerged as an academic "problem" area, and without doubt we shall soon see renewed attention given to related library acquisitions.

Ironically, language study requirements in American universities were steadily lowered during the rise of American political and military power abroad and the dominance of American scholarship in modern social science disciplines. With the apparent decline of that influence in the late 1960s, there has been a visible increase in the quantity of research publication in other languages.

Publication Rates and Higher Education

In many of the large university libraries more than 60 percent of acquisitions have come from abroad.[45] World book production rose from an estimated 184,000 volumes in 1937[46] to 561,000 in 1972.[47] U.S. book production also tripled: 10,640 in 1939 and 30,000 in 1974.[48] The output of American university presses, to a certain extent an indicator of scholarly book production, rose from 727 titles in 1948 to 1,846 in 1974.[49] But clearly, the growth of the collections in university libraries has gone well beyond the increase in publication of new titles.

The dramatic rise in the number of students during the past twenty-five years has required the provision of large numbers of multiple copies, as well as numerous other purchases in support of the teaching programs. Recognizing the very different needs of graduate students and research faculty on the one hand and undergraduates on the other, many universities followed Harvard's example in establishing separate undergraduate libraries. The experience at other institutions, such as Michigan and Cornell, brought about a unique collaborative effort of faculty members and librarians in conceptualizing the "ideal" college collection. This effort led ultimately to publication of the selection guide for three new campuses of the University of California.[50] The publication of this list has had a notable impact on the development of academic library collections, and it was quickly raised to "Bible" status.

Meanwhile, the spread of the number of universities offering Ph.D. degrees created a market large enough for commercial republication of large numbers of scholarly and scientific journals, as well as of individual books. Library

budget increases, because of intense faculty pressure to make up for past deficiencies or to develop collections in fields not previously touched, resulted in a visible expansion of the market. A relatively small group of enterprising publishers and booksellers, domestic as well as foreign, jumped at this opportunity, and their offerings quickly emphasized the apparent shortcomings of the collections. This spiral movement of demand and supply was reinforced by the large sums of money made available to libraries under the Higher Education Act of 1965.

Not only had a good number of the standard sources become available again, but the availability of previously inaccessible materials, such as newspapers, historical archives, and complete collections of early American and early English books, greatly improved the research resources of scholarly libraries. Much of this expansion was through publication in microform. The same format of publishing assisted in solving problems of space and physical deterioration of printed books and journals.

New Selection Practices

Recognizing the need for coordinated and systematic development of the collections, enlightened faculties at many universities increasingly relied on librarians to guide the selection process. A generation of uniquely capable bibliographers such as Donald Wing at Yale, Felix Reichmann at Cornell, Rudolf Hirsch at Pennsylvania, and Elmer Grieder at Stanford made their mark. By the 1960s the scope and size of the selection process had grown well beyond the capabilities of part-time faculty selectors, and one by one each of the larger libraries appointed an in-house book selection staff. The subject bibliographer arrived on the scene, combining selection responsibilities with library-faculty liaison. Although individual faculty members have continued to exert influence in development of collections, more and more the daily selection tasks were transferred to the library.

The high acquisition rate of currently published materials led to novel selection techniques. The imaginative and enterprising bookseller Richard Abel expanded the old concept of the approval plan to a comprehensive level in various subject categories. As other booksellers followed suit, many university libraries were induced to sign up with one plan or another. The effectiveness of such approval plans was highest in libraries that utilized the service as a means of identifying appropriate books to review for selection. When such screening had to be applied in the face of decreasing purchasing power in the 1970s, problems arose, and with the financial demise of the Richard Abel Company in 1974 the popularity of approval plans dropped significantly. Nevertheless, new standards of service by American booksellers to academic libraries had been set.

Before World War II the publishing of scholarly and scientific periodicals was largely in the hands of learned societies or other not-for-profit agencies. The explosion in the production of scientific information brought a proliferation of new journals. The ready market attracted commercial publishers into the field, and the share of the book funds allocated for periodical subscriptions by the university libraries began to rise rapidly during the latter 1960s. In recent years that share has increased even more dramatically, as the result of inflation and shifts in international currency exchange rates. At present, balanced collection development plans are being seriously disrupted, and libraries have been forced either to sharply reduce their subscription lists or to decrease their book purchases disproportionately.[51]

Cooperative Programs

We have already alluded to the failure of attempts at establishing working agreements on divided collection development responsibilities among the major research libraries. Several cooperative programs have been successful, however. Under the auspices of the Association of Research Libraries, American doctoral dissertations have been made widely accessible through an extensive program of microfilming by University Microfilms and the provision of comprehensive bibliographical tools. Several collecting programs at the Center for Research Libraries, notably those involving foreign doctoral dissertations, foreign newspapers, state documents, and large microform projects, have not only allowed individual libraries selectively to reduce their coverage but, more importantly, have provided a reliable national resource.

Special Resources

Major research resources in the form of various special collections of rare books, manuscripts, and archives have been developed during the past twenty-five years. Harvard, Yale, and Indiana, among others, have built special facilities, thereby increasing service as well as visibility. Endowments, alumni, and "friends" are the main sources of funding for these activities in most cases. Many of the newer university libraries have successfully developed collections of contemporary authors; other libraries have added archival collections of social, political, or historical significance. The most spectacular acquisitions program has been the building of the Humanities Research Center at the University of Texas. Its creation proved that, even in a market of limited supply, the combination of determination and a liberal supply of funds can still lead to the development of truly great research collections.

Conclusion

Good scholars need good libraries, and good libraries attract good scholars. This interaction is the dominant theme in the story of American university libraries. With very few exceptions the prominent graduate programs at the turn of the century created the outstanding library collections of that time. Twenty-five years later, a review of perceived quality in graduate education closely correlated with the numerical ranking of the library collections.[52] (This correlation, it should be noted, applies principally to studies in the humanities and social sciences, and the academic prominence at that time of institutions such as the Massachusetts Institute of Technology and the California Institute of Technology does not correlate strongly with the size of their collections.)

A more sophisticated evaluation of graduate schools took place in 1965.[53] Once again it was found the top twenty-five humanities and social science programs are located at the universities that have the largest book collections, although the relative ranking in individual subject fields does not necessarily match the overall strength of the respective libraries. The notable exceptions in this listing are the Massachusetts Institute of Technology and the Graduate Center of the City University of New York, both of which are located in immediate proximity to excellent research library collections.

The collections of American university libraries have been built with vision, ambition, knowledge, dedication, and large amounts of money. The influence of pacesetters has been great, yet each university library reflects very much the particular academic history of its institution and especially the influence of a relatively small number of scholars and librarians. On balance, it has always been the scholar who provided the impetus; the librarian has made it possible.

TABLE 1

LIBRARY HOLDINGS (IN THOUSANDS OF VOLUMES) OF AND PH.D. DEGREES AWARDED BY MAJOR AMERICAN PUBLIC AND PRIVATE UNIVERSITIES, 1876–1975.

State / Institution (Year founded)	1876		1900		1910		1920		1930		1940		1950		1961		1971		1975	
	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD
Alabama																				
Auburn ..... (1856)	3		13		23				47		81		150		298	16		92	733	
Alabama ..... (1831)	6		25		30		34		75		250		357		694	29	748	236	1051	83
Alaska																				
Alaska ..... (1915)									11				32		59	4	304	12	358	
Arizona																				
Arizona State . (1885)									14		26		105		412	3		151	955	124
Arizona ..... (1885)			5		15		52		85		138	2	230	2	343	28		245	1723	219
Arkansas																				
Arkansas ..... (1871)	1		15		14		35		98		161		271		459	29	684	115	752	
California																				
Cal. Inst. Tech. (1891)			3				9	1	25	18	53	30	75	70	129	73	238	117	293	
Southern Cal. . (1879)					15		40		127	8	274	33	566	101	963	139	1452	468	1670	328
Stanford ..... (1885)			65	2	174	5	320	6	530	41	773	42	1092	166	1691	219	3584	580	4092	515
U. C. Berkeley . (1868)	14		99	2	248	6	479	23	756	83	1081	122	1665	244	2596	369	4009	798	4649	747
Davis ..... (1908)									23		54		66		208	38	909	179	1234	225
Los Angeles . (1887)									138		347		762	79	1568	159	3038	572	3519	487
Riverside ... (1907)									5		10		14		150		643	109		
San Diego .. (1912)											17		24		45		813	126	1102	167
Santa Barbara (1891)							4		15		36		51		149		844	36	1126	130
Colorado																				
Colorado State . (1870)			11		40		32		64		96		142		210	6	768	129	935	143
Colorado ..... (1861)			26		52		122		221	2	307	13	706	37	722	78	1401	249	1793	263
Denver ..... (1864)					12				58		94		263	9	375	40	565	94	802	
Connecticut																				
Connecticut ... (1881)					11		16		23		251		132		423	34	808	157	1400	193
Yale ..... (1701)	100		309	26	575	27	1250	28	1983	83	2219	113	3979	174	4478	238	5829	338	6618	348
Delaware																				
Delaware ..... (1743)	7		14		17		27		41		78		150		328	16	766		949	
District of Columbia																				
Catholic ..... (1887)			31		40	3	123	5	300	23	286	45	405	81	594	85	854	210	968	

George Washington .	(1821)	5		15					86		109	1	240	12	352		541	76	667		
Georgetown ...	(1789)	34		79	2	108		140	140	4	259	9	203	35	470	26	669	60	867	85	
Howard	(1867)	10		14		26		38	54		128		267		376		657		837	34	
Florida																					
Florida State ..	(1857)					3		12	36		83		231		568	64	916	218	1126	336	
Florida	(1853)					12		35	92		109	1	407	20	917	102	1487	273	1756	292	
Miami	(1925)										27		232		585		953	56	1072		
Georgia																					
Atlanta	(1865)	4		11		12		15	18		65		105		249			2			
Emory	(1836)	9		20		30		50	115		178		332		710	24	966	76	1150	69	
Georgia	(1785)	19		30		36		66	66		146	2	254	1	458	4	1158	255	1522	282	
Hawaii																					
Hawaii	(1907)							21	50		111		227		348	7	1130	89	1379		
Idaho																					
Idaho	(1889)			4		22		44	91		93		129		213		727	57	828		
Illinois																					
Chicago	(1891)			303	43	500	45	599	65	915	186	1300	163	1797	295	2142	209	3090	418	3622	439	
Illinois	(1867)	11		47		157	12	461	29	836	70	1217	130	2383	226	3383	409	4609	824	5509	747	
Northern Illinois	(1895)			12		12		25		32		50		74		156		604	30	749		
Northwestern ..	(1851)	28		70		142		193		280	23	637	58	1013	109	1481	140	2364	276	2474	369	
Southern Illinois	(1874)	2		15		20		35		31		48		124		517		1403	166	1847	172	
Indiana																					
Indiana	(1820)	7		35		77		134	6	218	19	345	11	796	68	1414	170	2341	380	3891	588	
Notre Dame ..	(1842)	20		52		60		103	1	143	4	195	12	263	21	550	33	1093	147	1220	145	
Purdue	(1865)	1		13		29		53		110	4	154	28	286	138	535	230	964	474	1231	367	
Iowa																					
Iowa State ...	(1858)	5		14		31		77	2	180	27	297	53	413	101	518	151	831	314	1063	207	
Iowa	(1847)	7		60		80	4	162	11	366	33	473	86	633	151	1056	147	1584	388	1879	321	
Kansas																					
Kansas State ..	(1863)	2		21		36		68		96		125	2	160	11	255	33	600	115	716		
Kansas	(1863)	2		33		76	3	132	1	232	11	320	78	424	23	925	79	1568	261	1799	287	
Kentucky																					
Kentucky	(1865)	13		18		23		41		116	2	280	7	497	17	925	35	1153	135	1426	151	
Louisiana																					
Louisiana State	(1860)	11		21		30		50		77		264	25	395	28	966	81	1348	205	1538	148	
Tulane	(1834)			25	1	47		82		141	1	242	2	342	11	743	22	1071	133	1217	84	

State Institution (Year founded)	1876		1900		1910		1920		1930		1940		1950		1961		1971		1975	
	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD
Maine																				
Maine ..... (1865)	3		24		41		68		84		179		233		319		437	23	497	
Maryland																				
Johns Hopkins . (1876)	5		194	35	142	25	225	31	376	64	567	65	839	84	1185	85	2085	194	2044	214
Maryland ..... (1807)	1		3		10		8	1	66	3	142	18	239	36	458	91	1049	346	1465	336
Massachusetts																				
Amherst ..... (1821)	37		72		80		125		162		226		279		348		449		506	
Boston College (1863)	9		31						125	5	175	3	232		541		828	56	909	
Boston Univ. . (1839)	7		25	2	122	6	58		142	4	207	20	319	48	521	138	831	220	1127	266
Brandeis ..... (1948)													25		234	18	455	99	500	
Clark ..... (1887)			18	8	55	14	95	11	126	12	162	6	200	27	233	19	282	26	336	
Harvard ..... (1636)	160	5	976	35	850	41	2028	49	2971	105	4159	153	5397	527	6848	344	8451	613	9206	477
U. Mass. Amherst ... (1863)	1		21		32		61		84	3	126	12		11	239		795	262	1362	337
MIT ..... (1859)	3		64		86	4	140	5	260		365	64	450	126	745	213	1314	399	1573	312
Michigan																				
Michigan State (1855)	4		23		31		45		75	4	152	10	416	68	825	200	1759	733	2102	603
Michigan ..... (1817)	30		160	4	270	9	432	14	784	81	1098	141	1415	194	2912	351	4200	784	4668	722
Wayne State .. (1868)			11		13				50		168		379		754	52	1367	208	1610	220
Minnesota																				
Minnesota .... (1851)	13		60	3	145		300	1	654	67	1088	113	1528	154	2020	218	3112	615	3559	538
Mississippi																				
Mississippi .... (1844)	7		17		26		31		50		77		151		336	2	464	68	519	
Missouri																				
Missouri ..... (1839)	13		36		110	2	223	2	410	14	395	24	605	65	1043	90	1589	158	1793	227
St. Louis ..... (1818)	22		50		60	17	75		140	5	374	8	437	24	481	47	710	151		
Washington U. (1853)	2		5	2	109		176	3	295	10	409	4	527	45	821	37	1421	154	1545	162
Montana																				
Montana ..... (1893)			7		16		46		183		212		303				561	32	676	
Nebraska																				
Nebraska ..... (1869)	2		53		90	1	147	3	256	11	353		471		690	77	976	223	1208	205
Nevada																				
Nevada ..... (1864)			13		17		35		50		63		90		164		413	23	512	
New Hampshire																				
Dartmouth ... (1769)	48		105		120		150		250	1	512		666		829		1030	21	1172	51

New Hampshire (1866)			6		26		40		66		106		170		295	9	560	29	698	
New Jersey																				
Princeton ..... (1746)	46		144	3	270	9	444		643	31	959	43	1166	80	1689	140	2314	255	2715	251
Rutgers ..... (1766)	11		46		61		106	1	239	5	342	12	573	49	961	81	1164	182	1839	258
New Mexico																				
New Mexico .. (1889)			4		8		13		34		80		184	5	326	23	720	129	886	
New York																				
City College .. (1847)	19		33		39		71		100		245		370		522			112	863	
Columbia .... (1754)	17		345	21	448	44	747	69	1222	184	1715	198	1897	456	2939	329	4241	505	4661	521
Cornell ..... (1865)	39		268	19	383	35	630	45	810	129	844	131	1463	210	2198	239	3779	508	4272	460
Fordham ..... (1841)					50		100	7	110	54	198	23	260	43	401	77	927	94		
NYU ..... (1831)	4		54	7	100	10	153	6	319	46	592	125	888	179	1121	307	2111	567	2456	488
SUNY																				
Albany .... (1844)							2		15		30		46		65		611	50	1007	110
Buffalo ..... (1846)							29		62		161		195		374	29	1575	245	1523	241
Stony Brook . (1957)															35		586	55	956	98
Syracuse ..... (1870)	9		64		78	1	109	2	195	2	322	3	348	36	559	94	1548	231	1541	216
Rochester .... (1850)	12		40		52		83		190	2	360	25	514	36	721	61	1179	198	1402	200
North Carolina																				
Duke ..... (1838)	12		16		40				192	8	600	23	994	46	1493	82	2231	220	2622	155
N. C. State ... (1891)			4		8		10		30		55		108		226	48	550	203	692	
North Carolina (1789)	17		43		58		93		223	27	386	34	557	100	1077	96	1819	245	2125	332
North Dakota																				
North Dakota . (1883)			10		35		58		98		89	2	165	2	226	10		85	341	
Ohio																				
Case Western																				
Reserve .... (1826)	11		36		90		138		350	5	554	25	644	33	758	51	1175	326	1558	227
Cincinnati .... (1819)	1		32		118	1	125	2	256	14	491	27	649	20	813	5	1156		1553	147
Kent State .... (1910)											76		106		204		648	48	1066	103
Oberlin ..... (1832)	15		59		98		204		323		404		486		552		695			
Ohio State .... (1870)	1		45		95		215		359	68	552	97	863	229	1447	260	2539	676	3033	649
Ohio Univ. ... (1804)	6		17		30		52	2	75		127		197		312	5	460	108	652	
Oklahoma																				
Oklahoma State (1890)					14		25		58		139	5	275	15	619	53	1006	217	1141	213
Oklahoma .... (1890)			8		16		32		130		217		333	15	782	49	1158	220	1285	249
Oregon																				
Oregon State .. (1868)			3		8		41		93		172	4	252	20	396	52	643	208	736	
Oregon ..... (1872)			11		30		94		233	2	307	2	451	12	822	49	1104	349	1266	250
Pennsylvania																				
Lehigh ..... (1865)	2		115		125		100		190		245		310	19	391	25	549	109	612	

State / Institution (Year founded)	1876		1900		1910		1920		1930		1940		1950		1961		1971		1975	
	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD	Vols.	PhD
Penn. State ... (1855)	3		16		40		75		120	3	207	40	323	69	620	175	1165	601	1825	340
Pennsylvania .. (1740)	20	7	260	15	293	35	503	21	712	90	934	71	1194	124	1703	157	2329	362	2640	326
Pittsburgh .... (1787)	3		15		15	2	24	3	145	22	191	43	578	80	977	112	1456	357	1972	412
Temple ..... (1884)					8		9		41		149	8	322	14	527	34	1029	147	1247	102
Puerto Rico																				
Puerto Rico ... (1900)							8		25		73		123		538		879			
Rhode Island																				
Brown ..... (1764)	46		135	3	186	5	270	3	403	11	573	19	735	35	1059		1390	156	1536	145
Rhode Island . (1892)					17		22		25		60		105		194	3	437	45	584	
South Carolina																				
South Carolina (1801)	30	2			43		65		110		156		212		496	7	934	80	1372	106
South Dakota																				
South Dakota . (1881)			8		16		38		70		103		135		182	2	308	40	379	
Tennessee																				
Tennessee .... (1794)	4		16		29		41		112		169		276	12	670	37	1122	262	1229	253
Vanderbilt .... (1872)	7		30	1	45	2	80	2	150		374	9	567	36	809		1301	189	1301	207
Texas																				
Houston ..... (1934)											14		72		231	9	664	120	1192	192
Rice ..... (1891)									81	3	151	6	206	12	392	26	660	115	875	88
Southern Methodist .. (1910)									83		112		283		531			49	955	
Texas Tech ... (1923)									16		70		100		471	9		102	946	
Texas ..... (1887)			45		72		194		422	19	639	46	934	86	1424	154	2427	438	3726	454
Texas A & M . (1876)			9										175		401		716	215	926	234
Utah																				
Brigham Young (1875)									67		117		169		330			78	1267	58
Utah ..... (1850)			30		31		62		102		149		250		438	55	1178	242	1520	245
Vermont																				
Vermont ..... (1791)	20		89		80		105		128		152		200		220		579	24	563	
Virginia																				
Virginia ..... (1819)	40		50	2	70	4	120	4	172	16	338	26	592	36	1111	41	1699	223	2006	172
Virginia Polytech. ... (1872)	1		4		12		30		61				135		289		626	154	877	
Washington																				
Washington State ..... (1890)			7		23		74		200	2	406	2	600	17	750	41	853	142	1010	162

Washington ...	(1861)			24		41		120	2	258	13	356	33	700	38	1104	113	1876	154	2187	386
West Virginia																					
West Virginia .	(1867)	4		17									4	232	3	461	5	684	101	814	
Wisconsin																					
Marquette	(1857)			10		18		30		53	2	93	4	172		310			38	536	
Wisconsin																					
Madison ...	(1836)	8		81	5	151	18	276	34	422	130	485	160	777	298	1455	397	2417	913	2973	819
Milwaukee ..	(1908)					28		30		41		50		78		149		663	16	938	
Wyoming																					
Wyoming	(1886)			14		28		46		75		104		154		284	7	465	89		

Source: Figures in these tables were drawn from a variety of sources. They are, of course, based on differing counting techniques and are not necessarily compatible at all times. In cases of extreme variations we have omitted the information. The main sources on library collections were: *Annual Report of the Commissioner of Education* for 1876, 1900, and 1910; the *Biennial Survey of Education* for 1918–20, 1928–30 and 1938–40; the *Library Statistics of Colleges and Universities: Institutional Data* for 1960–61 and 1970–71; and the Preliminary Report (December 1975) of the *Survey of College and University Libraries* of the National Center for Education Statistics. Additional data were retrieved from *Public Libraries in the United States of America* (1876), *College and University Library Statistics* 1919–20—1961 (Princeton University Library); the *Academic Library Statistics* 1970–71 and the *ARL Statistics* 1974–75, both issued by the Association of Research Libraries, as well as editions of the *American Library Directory*. Opening dates of universities are quoted from *Webster's New Collegiate Dictionary* (1974). Information on the number of Ph.D. degrees come from the above quoted *Annual Reports* and *Biennial Surveys;* M. Irwin, *American Universities and Colleges*, 6th ed. (1952); *Index to American Doctoral Dissertations* 1960–61 and 1970–71 as well as from *ARL Statistics* 1974–75, accounting for the incomplete data for 1975.

References

1. Guy S. Ford, "The Library and the Graduate School," in Association of American Universities, *Journal of the Proceedings and Addresses of the Fifteenth Annual Conference*, 1913, p.39.
2. Richard Hofstadter and C. Dewitt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia Univ. Pr., 1952), p.53.
3. Columbia University, President, *Twelfth Annual Report*, 1901, p.207.
4. Edmund J. James, *Sixteen Years at the University of Illinois* (Urbana: Univ. of Illinois Pr., 1920), p.103.
5. Arthur E. Bestor, "The Transformation of American Scholarship," in Pierce Butler, ed., *Librarians, Scholars and Booksellers at Mid-Century* (Chicago: Univ. of Chicago Pr., 1953), p.10.
6. Derek de Solla Price, *Little Science, Big Science* (New York: Columbia Univ. Pr., 1963), p.101.
7. Edward G. Holley, "Academic Libraries in 1876," *College & Research Libraries* 37: 15–47 (Jan. 1976).
8. C. C. Jewett, "Report of the Assistant Secretary of the Smithsonian Institution Relative to the Library," *Reports of the Smithsonian Institution* (3d ed., 1849), p.47–49.
9. Quoted in J. Periam Danton, *Book Selection and Collections: A Comparison of German and American University Libraries* (New York: Columbia Univ. Pr., 1963), p.18.
10. Horatio S. White, *Willard Fiske, Life and Correspondence; A Biographical Study* (New York: Oxford Univ. Pr., 1925), p.92.
11. Albert Predeek, *A History of Libraries in Great Britain and North America* (Chicago: American Library Assn., 1947), p.100–02, 153 (n.372).
12. Richard Dorn, "Otto Harrassowitz, Buchhandlung-Verlag-Antiquariat: The First Century," *Harvard Library Bulletin* 21: 365–74 (1973).
13. A. C. Potter, "The Selection of Books for College Libraries," *Library Journal* 22:44 (Oct. 1897).
14. Danton, *Book Selection and Collections*, p.81–88.

15. M. B. Iwinski, "La statistique internationale des imprimées," Institut International Bibliographie, *Bulletin* 16:1–139 (1911).

16. American Historical Association, Committee on Bibliography, *A Union List of Collections on European History in American Libraries,* Compiled by E. C. Richardson. Trial ed. (Princeton, 1912). Supplement. Copies Added, 1912–1915. (Princeton, 1915).

17. W. Dawson Johnston and Isadore G. Mudge, *Special Collections in Libraries in the United States,* U.S. Bureau of Education *Bulletin,* 1912, no.23, whole no.495 (Washington, 1912), p.85–88. Supplement in *Library Journal* 38:331–33 (June 1913).

18. James T. Babb, "The Yale University Library," *Library Trends* 15:208 (1966).

19. Lawrence Thompson, "The Historical Background of Departmental and Collegiate Libraries," *Library Quarterly* 12:49–74 (Jan. 1942).

20. J. C. M. Hanson, "The University Library: Its Development and Problems," *University Record* n.s. 13:207–08 (July 1927).

21. Ernest C. Richardson, "Cooperation in Lending Among College and Reference Libraries," *Library Journal* 24:32–36 (July 1899).

22. Guy S. Ford, "The Library and the Graduate School," p.44.

23. George A. Works, *College and University Library Problems: A Study of a Selected Group of Institutions Prepared for the Association of American Universities* (Chicago: American Library Assn., 1927).

24. Ibid. p.14–15.

25. Ibid. p.75.

26. Ibid. p.76.

27. Ibid. p.39.

28. Ibid. p.40–41.

29. C. W. Smith, "The Vanishing Supply of Research Periodicals," *Library Journal* 49: 117 (Feb. 1, 1924).

30. Ernest C. Richardson, *An Index Directory to Special Collections in North American Libraries* (Provisional ed., unedited; Yardley, Pa.: F. S. Cook, 1927).

31. W. W. Bishop, "Resources of American Libraries," *Library Quarterly* 8:445 (Oct. 1938).

32. Abraham Flexner, *Universities; American, English, German* (New York: Oxford Univ. Pr., 1930), p.79.

33. Princeton University Library, *College and University Library Statistics; 1919/20–1943/44* (Princeton, 1947).

34. Bishop, "Resources of American Libraries," p.475.

35. See, for example, Wilhelm Munthe, *American Librarianship from a European Angle. An Attempt at an Evaluation of Policies and Activities* (Chicago: American Library Assn., 1939).

36. Dan Lacy, "War Measures, Past and Present," in Pierce Butler, ed., *Librarians, Scholars and Booksellers at Mid-Century* (Chicago: Univ. of Chicago Pr., 1953), p.89.

37. Reuben Peiss, "European Wartime Acquisitions and the Library of Congress Mission," *Library Journal* 71:863–76 (June 15, 1946).

38. Carol A. Nemeyer, *Scholarly Reprint Publishing in the United States* (New York: Bowker, 1972), p.50.

39. Robert B. Downs, "Wartime Co-operative Acquisitions," *Library Quarterly* 19:157–65 (July 1949).

40. Lacy, "War Measures," p.89.

41. Edmond L. Applebaum, "Foreign Acquisitions Programs of the Library of Congress," in Theodore Samore, ed., *Acquisition of Foreign Materials for U.S. Libraries* (Metuchen, N.J.: Scarecrow, 1973), p.18–27.

42. Glenn F. Read, "SALALM: Thoughts on the Birth and Development of an Organization," in D. A. Clarke, ed., *Acquisitions from the Third World* (London: Mansell, 1975), p.177–91.

43. *Library Resources for International Education,* A Report Submitted by the Task Force on Library and Information Resources to the Government/Academic Interface Committee, International Education Project, American Council on Education (Washington, D.C.: American Council on Education, 1975).

44. Hendrik Edelman, "The Death of the Farmington Plan," *Library Journal* 98: 1251–53 (April 15, 1973).

45. John Dessauer, "Library Acquisitions. A Look into the Future," *Publishers Weekly* 207:17–28 (June 16, 1975).

46. Unesco, *Book Production 1937–1954 and Translations 1950–1954* (Paris: 1955), p.13.

47. Unesco, *Statistical Yearbook*, 1973, p.612.

48. From annual compilations in *Publishers Weekly*.

49. From unpublished statistics compiled by the Association of American University Presses.

50. *Books for College Libraries; A Selected List of Approximately 53,400 Titles Based on the Initial Selection Made for the University of California's New Campuses Program* (Chicago: American Library Assn., 1967). 2d ed. published in 1975.

51. Bernard Fry and Herbert S. White, *Economics and Interaction of the Publisher–Library Relationship in the Production and Use of Scholarly and Research Journals*. Final Report (Washington, D.C.: National Science Foundation, Office of Science Information Services, 1975).

52. R. M. Hughes, *A Study of the Graduate Schools of America; Read Before the Association of American Colleges, January 1925* (Oxford, Ohio: Miami Univ., 1925).

53. Albert R. Bowker, "Quality and Quantity in Higher Education," *Journal of the American Statistical Association* 40:1–15 (March 1965).

Hendrik Edelman is assistant director for collection development, and G. Marvin Tatum, Jr., is humanities librarian, Cornell University, Ithaca, New York.

ELDRED R. SMITH

Library Services to the Graduate Community: Introduction

THE PRIMARY CHARACTERISTIC that distinguishes universities from other types of higher education institutions is the emphasis and priority that they place upon graduate education and research. University libraries must, consequently, place a similar priority and emphasis upon meeting the needs of the graduate students and research-oriented faculty who compose the university graduate community. Traditionally, university libraries have focused their efforts, in this area, upon developing the large and complex collections which we have long recognized as essential to support quality graduate and research programs.

In recent years it has become increasingly obvious that this is insufficient. As research and scholarly publication continue to proliferate, the problems of successfully and quickly accessing the information that they need have become substantial for faculty and, particularly, for graduate students.

Consequently, university librarians are recognizing that they must play a much stronger role in assisting this critical clientele—and particularly graduate students—to gain effective access to the information that they need and to develop an awareness of the complex bibliographical structure of the literature of their field.

Substantial efforts have been or are in the process of being made in this direction in a number of university libraries. The articles by Connie R. Dunlap, Anne Grodzins Lipow, and Thomas J. Michalak will address this topic in relation to three such efforts which, despite their differences, have two critical features in common. First, they each involve a substantial investment by their libraries, particularly of quality professional time and effort. Second, they have each met with very positive response.

The articles are not intended, necessarily, as models for other institutions to follow. Rather, they should indicate ways that have been found or are being found to meet a basic issue that confronts us all. Finally, they should help to demonstrate that, even in the difficult fiscal period that lies ahead, the issue is not "can we afford to provide these services" but rather "can we afford not to." I, for one, am convinced that we can and must continue to develop and expand quality service programs for our graduate clientele. Hopefully, we can concurrently continue our present efforts toward improving the cost-effectiveness of basic operations and the internal reallocation of staff resources so that we can invest an increasing amount of our high-cost professional resources and efforts in such service programs.

Eldred R. Smith is director of university libraries, State University of New York at Buffalo. As chairperson of the ACRL University Libraries Section, he presided at the program on library services to the graduate community at the ALA Conference in San Francisco, July 1, 1975, and this introduction to the three following articles is based on his remarks given at that program.

CONNIE R. DUNLAP

Library Services to the Graduate Community: The University of Michigan

This paper discusses the unique problems and special needs of graduate students and how one library, dedicated to serving graduate students, attempts to provide specialized programs to meet their needs. The setting of goals, the establishment of priorities, and staff involvement in the planning and development of new programs are reviewed.

OWING TO THE GREAT INFLUX of undergraduate students in the 1950s and 1960s, academic institutions, and hence libraries, directed their major efforts toward the development of programs and facilities for undergraduates. Graduate students, despite their increasing numbers (more than two and a half times as many nationwide in the years between 1960 and 1972),[1] were, if not forgotten, largely ignored. Concurrent with the emphasis on undergraduates there was a tremendous increase in all types of publishing coupled with large infusions of federal money to library book budgets. Together the emphasis on undergraduate programs and the intensive development of book collections occupied and preoccupied librarians to such an extent that there was almost precluded the possibility of directing any special attention to the needs and problems of graduate students. It was not until the late 1960s that librarians really began to take notice of the increasingly large graduate student population which, by that time, was a complex mix of students from a wide variety of backgrounds. Today affirmative action and equal opportunity programs are opening graduate education to students who frequently have special needs and special problems that require service on an individualized basis. A still different kind of need is presented by the "older" students, especially those in fields in which knowledge and training quickly become obsolete, who are returning to the campus in greater and greater numbers for brief refresher courses. Each group of students makes very different demands on the library.

In addition to a shift in the mix of students, many significant developments have taken place in higher education. Methods of teaching and course content have changed considerably, and research is becoming more diversified and more specialized. As a consequence, graduate students are making less use of prescribed reading lists and course reserves and greater use of a broad range of materials. The application of the interdisciplinary approach to nearly all fields

Connie R. Dunlap is university librarian, Duke University, Durham, North Carolina. *This article is based on a talk given at the ACRL University Libraries Section program on library services to the graduate community at the ALA Conference in San Francisco, July 1, 1975. At that time the author held the post as deputy associate director, University Library, University of Michigan, Ann Arbor.*

of study and the growth of new combinations of subject matter within fields have tended to promote more independent study and research. The interdisciplinary approach has caused the creation of a vast array of specialized reference tools to provide in-depth access to materials in related disciplines, but it is also creating a massive void for which suitable reference works are not yet available. Reference librarians are thus required to become increasingly imaginative and creative in ferreting out needed information. The use of a wide variety of technological aids, from the computer to videotape, has opened new areas for research and has provided new techniques for supplementing classroom teaching. Their use has promoted the creation, in many institutions, of an entirely new concept of library service which provides the students with specially equipped carrels or viewing rooms for using slides, movies, videotapes, or closed-circuit television.

It is becoming increasingly apparent that providing a large book collection is only one element of good library service. Research libraries are extremely complex organizations; and unless service programs designed to teach students the effective and efficient use of a large library are fully developed, their rich resources will lie largely untapped except to a knowledgable few. We cannot continue to justify the expenditure of millions of dollars each year to build collections which are only minimally used. New ways must be developed to permit and encourage greater exploitation of the collections. Given present economic conditions, there seems little likelihood that budgets for staff will be augmented to any significant degree in the foreseeable future so the cost of such programs may have to be funded, to some extent at least, at the expense of the book budget. The idea of sacrificing a small part of the book budget for service programs will become less abhorrent as national plans for resource sharing and cooperative collection development reach a more advanced state and as specialized programs for graduate students are more highly developed and have fully proved their worth.

Graduate Students' Needs

In studying for the doctoral degree, graduate students are attempting to gain in-depth knowledge of a specialized field and to prepare for a career in which research is a basic element. To achieve these goals, a thorough understanding of the organization and intricacies of a large library and the acquisition of research skills are absolutely essential. A recent survey by the Dissertation Review Committee in the Graduate School at the University of Michigan revealed that faculty, Ph.D. candidates, and Ph.D. alumni felt that the five most important objectives of the dissertation were to acquire broad research skills, to organize and communicate research findings, to develop the capability of making future contributions to knowledge, to identify important problems, and to develop high-level problem-solving skills. According to the survey, the respondents' judgments about the importance of dissertation objectives are related in part to the academic division in which they operate. By and large, the life and physical scientists were most oriented to high-level problem-solving, contributing thereby to the advancement of knowledge. To a lesser extent, the social scientists were concerned about essentially the same things. Ph.D.'s in humanities and education, on the other hand, had a greater interest in more generalized research skills than in high-level problem-solving skills and placed greater emphasis on communication to the public and to students in the classroom.[2] To achieve these objectives, graduate students must be given a thorough indoctrination into the effective methods of using library

resources if they are to develop fully their capacity to pursue research independently.

One Institution's Response

In an institution such as The University of Michigan, which grants Ph.D. degrees in over 100 fields and master's degrees in more than 150 and which has over 15,000 graduate students who are required to work through the maze of one of the largest research libraries in the country, the need for specialized programs is obvious and overwhelming. These programs necessarily take a wide variety of forms according to the community of scholars served. A number of libraries at Michigan have special programs for graduate students.

For example, the automated data bases in MEDLINE, the independent interlibrary loan network established by the National Library of Medicine, make available to clientele of the Medical Center Library the broad range of medical and related scientific literature. Under development at the Medical Center is a massive media program to coordinate the use of all video and audio materials for the medical community. Computerized carrels will be an important component of this new service.

The Engineering Library has developed two special programs to instruct students, faculty, and others about the resources and services of that library. Only about one-third of the individuals taking advantage of these programs are engineers, the other two-thirds being library science students, faculty, or representatives of local industry. One is a slide presentation illustrating the use of the catalogs, basic indexes, and the union list and delineating the kinds of services available. The slide presentations are narrated by staff, rather than being recorded on tape, to permit interaction between staff and viewers. In this way the students can stop the presentation to ask questions or to request further explanation. The other program is divided into three sets: indexes and abstracts, patents and standards, and government documents and technical reports. In this latter program, it was decided against using an audiovisual approach because the information is more detailed and more difficult to grasp. Instead, liberal use is made of brochures showing examples of types of materials and giving explanations of how to use the tools in the field. Both programs have been highly successful.[3] Other divisional libraries, besides engineering and medicine, have also developed special programs according to the needs of the students they serve.

The Graduate Library at Michigan, which houses the main research collection, serves primarily, but by no means exclusively, the graduate students and faculty in the more than thirty academic departments in the social sciences and humanities. Students in these disciplines rely most heavily on the library for their research and require the broadest range of scholarly materials and the greatest diversity of special services. If such students wander aimlessly about the library, testing and probing with only marginal success, the quality of their work is diminished and the time necessary to complete it is lengthened.

In order to meet the widely varying needs of a large graduate student population and a research-oriented faculty, as well as to serve as the primary research library on campus and as a resource library for the entire state, it has been necessary for the Graduate Library to develop or expand a broad range of services. These include the traditional services of information, reference, interlibrary loan, and microforms, among others, to which a number of new services have been added including a serials service, a publishing program, and bibliographic instruction.

Since the control and servicing of periodicals and serials had long been a ma-

jor weakness, high priority was given to improving service in this area. Included are a noncirculating periodical collection comprising the bound volumes of about 400 of the most heavily used titles and an adjacent current serials service, which incorporates an improved method of controlling unbound serial publications and an expanded serials reference service. An index room containing the periodical and newspaper indexes and the major abstracting services was established in close proximity to both the current serials service and the public catalog.

A completely different kind of service, designed to provide students with a wide variety of specialized information needs, has been a publishing program. The most significant of the publications in the program is the Graduate Library Guide Series, which ultimately will provide each discipline or special subarea with critically annotated bibliographies of the major research tools in the field.

Another type of program, and the one which has had the greatest impact on the training of graduate students and which will have the most far-reaching ramifications for the future, is bibliographic instruction. This program has dealt the most directly with the specialized needs of graduate students and gives them extensive training in research methodology and an in-depth introduction to research materials. Term-long courses are tailored to the specific needs of advanced graduate students in a given subfield, and the techniques learned can be applied to related disciplines and to any other research library. In addition to providing them with subject-specific information, students are taught how to dispel the mysteries of a large library. These courses, taught in the library by librarians, are a direct scholarly service to the academic programs and have resulted in a major extension of the library's contribution to the educational process. It is also this service which most closely parallels the mission of the university—the advancement and organized transmission of learning. When fully developed, this program will have a major impact on teaching and research and also on the status and stature of librarians in the academic community.

Implementing Change

Making significant changes in service patterns is sometimes very difficult, especially when those changes require substantial alteration of attitudes and habits. The Graduate Library at The University of Michigan has been fortunate because two major building projects over the last ten years have made change an accepted way of life. It has been possible to take advantage of the natural upheaval and resulting physical alterations of a building under construction to shift direction and to introduce a new concept of service with relatively little additional stress. Many of the staff, stimulated by the visual show of progress that the construction of a new building made, were eager to extend that progress to an expansion and improvement of the total range of services offered. Each departmental unit within the Graduate Library was asked to review its operations and to set both short- and long-range goals and priorities. These were correlated and melded with the broader goals of the Graduate Library and with the mission of the university library as a whole.

In the establishment of new service patterns, the primary goals were to develop ways of reaching as many students as possible on as individualized a basis as limited staff would permit, to make an attempt to minimize the factory or supermarket atmosphere of a large institution, and to develop techniques which would make it possible to respond more quickly to the changing needs of students and to changes in the university

community. In setting priorities, first rank was given to those services which would complement the university's teaching function and the educational process to the greatest extent and which would have the greatest impact on the training of graduate students. Traditional services, with major improvements, had to be maintained, leaving at the bottom of the list a myriad of miscellaneous functions that are now being done if and as time permits. Backlogs in such areas have rarely been of serious concern; some of them seem no longer to matter very much. Actually, the backlogs are caused primarily by lack of clerical help and have relatively little to do with the new priorities. In most cases the staff has been so stimulated by the new challenges that twice as much is being accomplished.

Setting goals and establishing priorities are relatively easy, or at least relatively easier, in times of restrictive budgets than finding staff with the time, the energy, and the creative ability to plan, implement, and continue new programs. In order to stimulate staff sufficiently to insure full cooperation and to gain a commitment to any new endeavors, it is vital that they be deeply involved in the planning and decision-making processes. Major changes cannot be made without their enthusiastic support, for it is they who will do all of the hard work and they who will be directly responsible for any success a new program achieves.

A major consideration in the setting of priorities and the subsequent assigning of duties, whether to professional or to support staff, was to insure that each individual was given opportunity, through a variety of responsibilities, for maximum personal growth and development. It was intended that over a period of time all professional librarians, for example, would be given broad experience, as their talents and inclinations suggested, in supervision, book selection, instruction, reference, and special services. Giving staff a wide range of experience increases their interest in and commitment to the library. It also produces a staff which is very knowledgable and is flexible enough to make shifts in program emphasis with maximum ease. The fullest and best use of our human resources is one of the most important elements in any library service program, and their proper utilization will become even more vital as budgets continue to decline. In order to take advantage of the many technological changes that will occur over the next decade and to implement innovative and personalized services to graduate students and scholars on a much broader scale than is now possible, every creative and driving force in the staff must be stretched to its fullest potential, for it is only by maximizing these resources that we can hope to shape and control the future.

References

1. U.S. Bureau of the Census, *Statistical Abstract of the United States: 1975.* (96th ed.; Washington, D.C.: Govt. Print. Off., 1975), p.556.
2. "The Doctoral Dissertation Survey," *Rackham Reports* 2:6 (Spring 1975). This publication is issued by the Horace H. Rackham School of Graduate Studies, the University of Michigan.
3. From a conversation with Maurita Peterson Holland, Engineering Librarian, University of Michigan Library.

ANNE GRODZINS LIPOW

Library Services to the Graduate Community: The University of California, Berkeley

Services currently offered at the University of California, Berkeley, Library are evaluated in terms of their special or potential relevance to graduate students, especially as they meet students' needs in the various stages of their graduate careers—course work, dissertation proposal, dissertation research, and dissertation writing. Not only are special services necessary for the sake of the graduate student but are at the same time the means for increasing the scope and meaning of the professional librarian's role.

At first glance, it would seem the topic, "Library Services to the Graduate Community," represents an incorrect approach to a program of library service. Shouldn't we be asking ourselves not *who* wants to know, but rather what needs are and if we are prepared to meet them no matter who expresses them in the university community?

Another look at the problem, however, reveals a surprising reality: Our major university libraries are, in fact, geared toward the faculty and the undergraduate. The graduate community is by and large left out. This is so despite the fact that at most universities, including the University of California, Berkeley, graduate students represent 50 percent of the student body. For undergraduates we build elaborate undergraduate libraries, whose architecture, furniture, and general atmosphere transmit the message, "Let us help you." We should not overdo this point as all too often the undergraduate gets the short end of the deal. But in general it is true the university library does what it can to make class reserve collections efficient and fair, to provide a staff ready to teach undergraduates how to get the most from the library, and to develop special undergraduate-oriented browsing collections.

As for the faculty, we are especially helpful when we are aware it is a faculty member who makes the request. For example, when a professor suggests that a book be ordered, we have a mechanism to set in motion, and we do it relatively quickly. When a graduate student suggests a book to be ordered, how many times have we heard that student asked, "Do you know a faculty member who could sponsor or sign this request?"

Anne Grodzins Lipow is head of Cooperative Services, University Library, University of California, Berkeley. *The author acknowledges her debt to the following individuals for their assistance in formulating the ideas expressed in this article: Douglas Ferguson, Stanford University, and Simone Klugman, Sondra Shair, and Steve Donlan, University of California, Berkeley. This article is based on a talk given at the ACRL University Libraries Section program on library services to the graduate community at the ALA Conference in San Francisco, July 1, 1975.*

In short, when we think of the university, we think of "instruction" and "research." When we think of instruction, we think of the undergraduates. When we think of research, we think of the faculty. The graduate students have no prestige, no presence. But they do have very definite needs which are not met by their graduate research methods courses. Seldom do these courses deal with the basic question of how to use the library—largely because the faculty itself has not had the training or experience to do so. Graduate students need to know the literature in their field and its bibliographic structure. They need to know about some of the inadequacies and shortcomings either caused by or not well-solved by the libraries themselves. (Perhaps a good deal of faculty apathy toward the library stems from their experiences when they were graduate students.)

To correct this neglect, librarians must first ask themselves: What *is* special about the graduate student? Although there may be several answers to this question, one useful approach is to divide the graduate students into two groups: (1) those pursuing the professional degree and (2) those pursuing an academic degree.

Professional Degree Students

Professional degree students are most akin to undergraduates in the way they use the library. Though there is variation among professional schools, as a rule these students need material required in or supplementary to their course work; their information needs are rather clear-cut; the professional schools themselves often provide a good deal of the information and support in the form of syllabi designed for particular subjects. Whatever research projects the students engage in are usually short-term, and in such cases they may need bibliographic assistance at a somewhat more specialized level than the undergraduate. Yet, on the whole the professional degree students in disciplines such as law, medicine, business administration, pharmacy, and even librarianship, are well assisted by the services presently provided. Thus when we talk of the forgotten graduate student, we are not primarily dealing with this group.

Academic Degree Students

The second group, those students pursuing academic degrees, constitute that statusless group on which we need to concentrate. For the sake of analysis, the life cycle of this group may be divided into four stages: (1) course work; (2) dissertation proposal; (3) dissertation research; and (4) dissertation writing. In the discussion below, several services that are offered in limited ways at the University of California, Berkeley (UCB), are highlighted, services which are not necessarily all currently available to or focused primarily upon graduate students but which would give a glimpse of what is possible in the way of meeting needs that arise.

Course Work

University libraries are generally well equipped to satisfy the first stage, course-work needs. Here the graduate student who is pursuing the academic degree is basically in the same situation as the one pursuing the professional degree and as the undergraduate. Admittedly, this is an oversimplified description, as we know that graduate students take courses requiring short-term research leading to "mini-dissertations" which would, therefore, fit into the third stage, the research period.

Proposal Writing

During the second stage, the period of proposal writing, the graduate student's dependence on the library intensifies. At this time, most graduate students

need to be able to consult a librarian; some students should not proceed without that consultation.

At UCB such a service for graduate students has recently been formalized in the social sciences and humanities. This subject limitation is arbitrary and reflects the specialization and physical separation of subject collections within this large library system. In time, hopefully, this service will be extended to other fields. It is called the "Library Graduate Bibliographic Service." On an appointment basis a reference librarian meets with the graduate student, discusses library resources and guides to the literature and information in the student's subject, and opens the door to other collections or services such as computerized literature and information sources. The librarian at this point is an initial contact person whom the student can consult for on-going advice concerning the writing of the proposal and later problems as they arise. Conceptually, this service goes a step beyond the standard notion that librarians give service on a short-term, one-shot basis. Although the use of the service has been small (it is new and advertising has been kept to a minimum in order to be sure the undertaking is manageable), the librarians who provide the service and the students who have received it regard it as an excellent addition to existing programs.

Dissertation Research

After the dissertation proposal has been accepted, the student begins a third stage of graduate life when not only is it important to be able to consult the librarian again but also when two other needs come to the fore: (1) the need to retrieve large amounts of material from the library in the effort to read all the relevant literature and gather all the relevant data; and (2) the necessity of "keeping up" with what others are doing in the field—in other words, a current awareness service.

Retrieving Materials

The ease or difficulty of retrieving material from the library is directly related to the collection policies, cataloging practices, loan procedures, amount of paging and shelving assistance, as well as the spatial layout of the library. The complex library system at UCB, as well as severe budgetary and space problems over the last several years, has made the route one must go to retrieve material comparable to an obstacle course. No average library user can be expected to travel such a course with competence. In recognition of this state of affairs, UCB launched, in November 1973, under the umbrella of the Cooperative Services Department, a delivery service for the faculty. By dialing an easy-to-remember campus number whose digits translate to letters spelling BAKER (the name the service has come to be called) a faculty member can request up to four items per day, with as much or as little information he or she has at hand. A corps of student employees, especially trained in the art of retrieval, finds the material, charges it out to the requestor, has it photocopied if so desired, and then delivers it to the faculty member's departmental office. Within twenty-four to forty-eight hours the requestor has either the material itself or a report detailing why not. The service includes placing holds when material is out to another borrower, placing searches when there is no ready reason why it is not on the shelf, or retrieving from an off-campus storage facility or from an in-process location such as the bindery or the catalog department. If the material has been formally declared missing, the library tries to hasten the purchase of a replacement copy for the requestor. If the material is not owned by the library, a copy of the request is sent to the Collection Development Office as a candidate for ordering. If the

requestor so desires, the request will be transmitted to the Interlibrary Borrowing Service.

The delivery service has been an instant and continuing success. Unsolicited comments pour in from faculty in all disciplines expressing the value of the service to them as instructors and research personnel: the service saved them time; the library facilitated their research and freed them for more contact with students; frustrations had been reduced—guesswork, legwork, and all kinds of routine work had been eliminated. Most of all, many have been amazed at the library's ability to locate materials they themselves had been unable to find after long searches. Aside from the problems caused when the requestor has misspelled an author's name or there is a jumbled title, a significant number occur because the requestor doesn't know that the work is part of a series to which the library has provided access only by a series title. Or, frequently, the requestor knows a personal author when the work has been entered in the catalog under a corporate author or sponsoring governmental agency.

An interesting development is that many graduate students have found a way of using this delivery service for their own research purposes by identifying themselves to us as researchers for faculty. Since there are not yet enough student requests of this type, their requests have been honored; and the only concern is that a campus address for delivery is given. Their use of this service demonstrates that the graduate student's life in this stage of the cycle can be made much easier. It should be possible for a department to vouch for the student's need for this kind of service. In fact, UCB departments already differentiate for the library between graduate students in their course-work period and those in their research period: The latter receive longer borrowing privileges.

Current Awareness

To satisfy the current awareness need in the UCB library, both graduate students and faculty can receive computer-produced bibliographies tailored to an individual's needs in the fields of education, biology, agriculture, chemistry, and the social sciences. For a nominal fee of $5.00 to $10.00 per year, the university's Center for Information Services provides printouts weekly, biweekly, or monthly, depending on the data base accessed.

Another service worthy of mention is the New York Times Information Bank, not because graduate students use it in a unique way nor because it has any special application to the graduate community, but because it is a devious way of getting them into the library to introduce them to other resources and services. (This, of course, is true for faculty and undergraduates as well.) Once they have had their question answered by the bank (and it's hard not to be impressed with the results even when they may not be particularly relevant to the question asked), the librarian leads the users to other sources, more traditional in nature, yet still new to them.

Dissertation Writing

In the final stage of this graduate student life cycle, the writing period, a current awareness service is still helpful so that the student can be assured that everything is being covered that should be covered. The student's need for library resources in this phase is probably greatly reduced. Perhaps near the end of this stage, a retrospective computerized search, if an appropriate data base is available, would tie up any loose ends although this should not be necessary if the previous stages had been properly handled.

Conclusion

Although this discussion has not con-

sidered the costs to the library of these services, all of them are worthwhile. But if we put them in the context of other needs, such as book acquisition or staff salaries, they might very well rate lower in a hierarchy of priorities. On the other hand, experience at UCB does show that the money for a given service can be made available by its very inauguration if that service is really needed. For example, the delivery service was originally free to the departmental users. Beginning in July 1975, the UCB Library began to recover part of its costs by charging for it. It turns out that departments are quite willing to pay for such a service because they recognize its unique value. Indeed, from their standpoint they are saving money.

Not only are such services necessary for the sake of the forgotten graduate students, but at the same time they are the means for increasing the scope and meaning of the professional librarian's role. For behind the provision of these services lies an affirmation of the role of the librarian as the expert who can provide the key to the bibliographic organization of the literature of any subject area. Given the virtual explosion of knowledge sources, the librarian's professional role can and must become a central one. These services then are only a first step toward that goal.

THOMAS J. MICHALAK

Library Services to the Graduate Community: The Role of the Subject Specialist Librarian

A program of dynamic, interactive information service in the academic library is facilitated with direct contact between the user and the subject specialist librarian. This librarian can perform a number of important services: establishing contact with user groups; selection of materials and collection development; instruction in library use; provision of current awareness, reference, and bibliographical services; serving as a library "ombudsman" for users; and bringing user perspectives to the technical service departments of the library.

THE ACADEMIC LIBRARY must be a part of an interactive system in which librarians assist in the utilization of information resources and information. The library must have a philosophy of service which requires librarians to reach out to individual users or groups of users in order to: (1) identify their information needs; (2) identify the problems they encounter in attempting to fulfill these needs; (3) convey and demonstrate the range of services available in the library; and (4) bring back to the library an appreciation and understanding of user needs and the methods and tools of scholarship and instruction.

How can this kind of philosophy of academic library service be put into action? One way to develop an interactive, dynamic information service in academic libraries is to provide direct linkages with user groups through subject specialist librarians.

In recent years there has been considerable interest in subject specialist librarians or, as Maurice Line prefers to label them, information officers.[1] In 1968, at the ALA Conference in Kansas City, Robert Haro, Helen Tuttle, and Alan Taylor presented divergent views on the role of subject bibliographers in university libraries.[2] At the ALA Conference in Dallas in 1971, the ACRL Subject Specialists Section sponsored a program on the "Subject Specialists in Academic Libraries," at which Eldred Smith, Alan Taylor, and Thomas Kirk discussed the place and role of subject specialists in college and university libraries. We now know that subject spe-

Thomas J. Michalak is chief, Science and Engineering Division, Columbia University Libraries, New York. *This article is based on a talk given at the ACRL University Libraries Section program on library services to the graduate community at the ALA Conference in San Francisco, July 1, 1975. At that time the author held the position of subject specialist for economics and political science, Indiana University Libraries, Bloomington.*

cialists "have arrived" insofar as they have become the subject of dissertations and several fellowship grants by the Council on Library Resources. In June 1975 the Council on Library Resources announced an "Advanced Study Program for Librarians" to further the development of subject specialists for the nation's research and academic libraries.

Increasing numbers of British and American university libraries have adopted the practice of providing linkages between academic departments and the library through subject specialists, information officers, and liaison librarians. What is important is the function, whatever the terminology, and in this article the term, librarian, will be used for this kind of librarian. Through the liaison function of this librarian, the needs and problems of library users and the services of the library are brought together. The librarian is assigned the responsibility for communications with a specific academic department or group of academic departments. The librarian has training, usually at the graduate level, in one or more of the disciplines represented by the academic department(s); is possessed with communication skills; and has the self-confidence so as to contribute to the research and teaching objectives of academic departments. In addition, this librarian has responsibilities such as book selection and collection development, reference services, bibliographical control, instruction in the utilization of library resources, the development of current awareness or selective dissemination of information (SDI) services, and what can be termed an "ombudsman" function.[3]

Acting in such a capacity, the librarian does not wait for the user to come to the library but actively seeks out the user, not only in the library but also in departmental offices or classrooms. The librarian has a threefold responsibility: first, to identify and communicate the needs of the users in the development and implementation of library operations, services, and policies; second, to identify and interpret bibliographical and informational resources to the users; and, third, to interpret library operations, services, and policies to the users.

Establishing Contact

Since the librarian is responsible for the delivery of certain kinds of academic library services to discrete groups of users, the librarian initiates the contact with the user. Before a new faculty member sets foot on the campus, the librarian should have made first contact. Even preferable to this would be the inclusion of the librarian as part of the interview process for prospective faculty members. In any case, contact should be made before the faculty member's arrival in order to get a clear perception of the faculty member's fields of research and teaching interests and, more practically speaking, to solicit reserve or reading lists in advance of arrival. When the faculty member arrives, the librarian should call on him or her in order to explain the library's services and the librarian's role in them.

Similar practices can be followed with new graduate students. At Indiana University, the graduate students in the Political Science Department have established a two-day orientation program for new students, and the librarian meets with these students and conducts a facilities tour. A graduate student's life revolves around the academic department. Establishing initial contact with the liaison librarian personalizes the library's services, and the student becomes aware that there is a librarian connected with the academic department to assist at the proper time.

Book Selection and Collection Development

A major responsibility frequently assigned to subject specialists is that of

selection and collection development for specific disciplines or academic departments. This responsibility involves not only selection of current materials, but also retrospective purchasing; preservation activities; weeding; decisions regarding conversion of materials into other formats such as microfiche, binding, and replacement of missing materials; and frequently, particularly in the case of librarians with geographical area responsibilities, establishing contacts in foreign countries for the purposes of exchange and/or purchasing.

The librarian cannot do selection and collection development in isolation. Collection development requires the preparation of profiles of the institution's curriculum within the scope of the librarian's assignment, the identification of areas of overlap among disciplines, and the identification of cross-disciplinary areas in order to establish collection policy in conjunction with the activities of users and the objectives of the university. Collection development also requires the development of a profile of research interests of the faculty and the students, the identification of their subject interests, and the methodological approaches employed. Existing resources and collections of the library and other units within the university, for example, clandestine or fugitive reading rooms and numerous caches of material stashed in the most unlikely places on the university campus, must be identified, evaluated, and, if possible, brought under bibliographical control in some way. Strengths, weaknesses, and gaps must be identified, and all these factors must be brought together into a coherent collection policy to guide the decisions of librarians and others in the selection and collection development process.[4]

The librarian must develop sensors as to the needs of users and the goals and objectives of the library's collections. In developing selection and collection criteria and priorities, the librarian consults with members of the faculty and the chairperson of the academic department to get an idea of current teaching and research and future directions of the department; examines dissertations produced by students in the department; examines circulation and reserve lists; reviews the collections; and, in short, seeks any means which will give some insight into the curricular or research interests or activities of the librarian's publics.

In addition, newsletters and journals are primary sources for the identification of relevant material and, more importantly, for keeping abreast of changes and new directions within the field and the development of subfields within disciplines. The librarian in this active role develops the kinds of sensors which ultimately contribute to the satisfaction of the needs of the clientele. Through liaison and interaction with users, the librarian is aided in establishing appropriate collection policies and priorities.

Instruction

The subject specialist librarian can play a vital role in the instruction of all levels of users—faculty, graduate students, and undergraduate students. Instruction should be interpreted to mean teaching or guiding users in utilizing or obtaining a wide range of materials needed for instruction and research.

Arranging a presentation on the *Social Sciences Citation Index*, explaining the use of a new reference tool to an individual user, bringing a recent acquisition to the attention of a student, helping a user become aware of the extension of the library's resources through the Center for Research Libraries or other cooperative programs are a few examples of instructional activities which are part of the daily routines of librarians.

Instruction can also be more formalized. The development of credit or non-

credit courses in many libraries is both a response to expressed user needs and an anticipation of the needs of students. Through instructional activities, the librarian develops additional insights into the problems of users and their information needs, insights into how people go about their work, and useful feedback on whether the library is meeting information needs, particularly in ways which are not frustrating to the user. Formal instruction can be effective in bringing to the student a wide range of resource materials, methods of access to resources, the intricacies of access tools, and the mysteries inherent, so it seems, in the delivery of library services.

Librarians can best perform the instructional function in coordination with academic departments by the development of formal courses of instruction in the bibliographical and research resources of a specific discipline. Ideally, these courses will be for credit in the student's major department, particularly as the department then views the training in bibliographical and research resources as part of the methodological training of graduate students. This affects the seriousness with which students will approach the subject matter.

At Indiana University, for example, there are formal courses offered in chemical literature, art history, political science, Latin American studies, Slavic studies, and African studies. The latter course is a required course for all students in the African Studies Program while the other courses are optional. The range of courses which are possible includes all disciplines, providing the talents of librarians and the support of academic departments are present. Such instruction need not be limited to graduate students, but can include undergraduate majors as well.

Other forms of instruction may include developing specific lectures or presentations to meet information needs in specific courses, for example, United Nations documentation, legislative tracing, census data, nineteenth century English literature, and folklore. The stimulus for this form of instruction can come either from the librarian or from the faculty member or teaching assistant. A certain diffusion of innovations takes place, and the successful librarian may be called upon by faculty members to quickly expand the repertoire of library or bibliographical research lectures.

Current Awareness Services

An important service which librarians can render to faculty and graduate students is the development of current awareness or selective dissemination of information (SDI) services. Through collection development, the librarian is in an enviable position of being able to "keep up" on the literature. The librarian can thus assist users in the arduous task of "awareness." This service can, of course, take many forms, ranging from highly sophisticated systems utilizing MARC tapes or other machine-readable records, to the very simple and inexpensive mimeographed acquisitions lists depending on the availability of systems, dollars, and time.

The system developed to serve users in the departments of economics and political science at Indiana University is at the simple and inexpensive end of the spectrum. Once a month a list of recent acquisitions is published in each subject. These lists are selected and compiled from catalog and other records and are typed in the librarian's office. Copies are reproduced in departmental offices and distributed to faculty members and interested graduate students. Copies are also made available in the library to anyone interested, and a limited mailing list consisting primarily of ex-students and faculty members is maintained.

In order to assist faculty members in

keeping abreast of periodical literature, each faculty member may submit a list of up to fifteen journals for which he or she wishes to receive the contents pages as journals are published. As the library receives the journals, title pages are photocopied and distributed. In 1974–75, approximately 2,800 title pages were distributed to participating faculty members in the departments of economics and political science.

In addition to these modest methods of current awareness, delivery services for books and periodical articles have been provided to faculty members in economics and political science since the fall of 1972. A faculty member either sends to the librarian a request slip or leaves it in the departmental office where a student will pick it up and bring it to the library for processing. These requests are processed by the subject specialist's staff, and the book or photocopy of journal article is delivered to faculty mail boxes in the departmental offices. Delivery is usually made within two or three days of receipt. If the material is not immediately available, the request is put in a queue, and as soon as the material becomes available, the material is dispatched. Hence faculty members have come to realize that, once an item is requested, they will receive it in due course. The cost of this service is modest. Clerical costs for retrieval and delivery average 51 cents per transaction. The photocopy charge averages 38 cents per article. This latter figure, however, does not include personnel costs in photocopying, but only machine costs. The photocopy charges are paid from book funds. The service has proved so beneficial to the Political Science Department, that the department supplied $1,000 to cover part of the clerical costs, which are about $1,700 a year. The service is justified in terms of user satisfaction, and, more importantly, in terms of the economics of the faculty member's time.

The development of machine-readable data bases opens up a whole new area for interaction between librarian and user. The complexity of data bases and the fact that few individuals can master more than several indicates that utilization of these new resources may require the mediation of a librarian. Where subject specialists or information officers exist, no doubt the responsibility will be seized by them. As Maurice Line has stated: "The increasing complexity of information systems means that all but the most persistent and sophisticated user will at times, and probably increasingly, find difficulty in using them effectively, or at all."[5]

The librarian will have to become familiar with relevant data bases in the area of specialization in order to assist faculty and students in the choice of data bases and the construction of searches. In marketing the availability of such data base packages offered by Lockheed and Systems Development Corporation, the academic library can utilize the existing contacts with academic departments already available in subject specialist librarians. After all, computerized data bases are merely another tool in the arsenal of available information resources, and it is the librarian's responsibility to bring the tool and the user together.

Reference and Bibliographical Services

Another important function that librarians perform is to provide reference and bibliographical services to faculty members and graduate students. Without getting into a discussion of the most appropriate place for subject librarians in the library organization, i.e., reference, acquisitions, or independent, one may simply state that they have an obligation and responsibility to provide reference services to members of the faculty and the students in the departments which they serve and, further-

more, to anyone who has a problem in the area in which they specialize. One distinction between subject specialists or information officers and bibliographers is that the former have a responsibility to share their knowledge and experience with others through reference, bibliographical, and other services.

The accumulation of experience and knowledge of materials and resources in a discipline are considerable assets in any academic department and must be made available to faculty and students, not in a passive role, but in an active one in which reference and bibliographical services are made available conveniently to users. This may mean that the librarians may have to be available at the times their prospective clientele use the library rather than at hours of their own choosing. In this regard, the placement of the subject specialist librarians in the service, or traffic, pattern of the library can be significant. If the library is merchandising its services, then it is imperative that the subject specialist librarians be located where the user can readily identify their existence and their services.

The librarian as subject specialist has a command of the available information resources within the university and beyond the community as well. In this capacity, the librarian does not merely work with the user in the identification of single resources, but helps the user identify the infrastructure of information relevant to a specific research project—bibliographical, data, and other resources. In assisting graduate students, the librarian can make a significant contribution in the development of appropriate topics for dissertation research, and it may be appropriate for the librarian to serve on a graduate student's research committee.

The librarian as a bibliographical and research resource is available not only to students, but also to members of the faculty. The librarian can become an important part of a research team by the identification of appropriate materials and sources for faculty research. In practice, few librarians have the time, given their other responsibilities, to stimulate faculty members to seek their active participation in research projects, and perhaps it is unrealistic to expect a great deal of activity in this area. But, nonetheless, the librarian should consider the extension of library services in this area and should attempt to make the library's services known, even if it is no more than the provision of delivery services for books and periodical articles. However, the liaison of librarians with faculty research projects can have a payoff in the provision of additional resources through research grants. The librarian as part of the research team can be a valuable asset in the conduct of research, and benefits from such a liaison can accrue to both parties.

Ombudsman

In conveying services to faculty members and graduate students, the librarian has the responsibility to interpret library operations, policies, and services to the users. The liaison role will often develop into a sort of library "ombudsman" function for members of the academic departments. Bibliographical, research, and service problems which users encounter will often be brought to the liaison librarian. The librarian must exercise discretion and tact so as not to make unreasonable demands or create undue strains on colleagues. But the librarian should do all that is possible to mediate a user problem in attempting to meet critical information needs of the library's clientele.

As users experience a receptivity and sympathy for their very real and personal information problems, the "ombudsman" role adds a significant dimension to the quality and personality of the library's services. On the other hand, users

must come to a better understanding of the library's problems, objectives, and priorities. The liaison librarian is in a good position to assist in educating the library's users in this regard. A librarian who has the confidence and respect of users can be persuasive in explaining the rationale behind a library policy. These librarians can make an important contribution in conveying to library users the nature of cooperative arrangements which are becoming increasingly important even in the largest and richest libraries. The faculty and students need to be informed of the existence and resources of such cooperative enterprises as the Center for Research Libraries. When a library enters into cooperative arrangements, the subject specialist librarians can be responsible for supporting these efforts and conveying their importance, use, and means of access to their academic departments.

Another example of this "ombudsman" activity is the assistance in the retrieval of materials from the technical processes pipeline. Graduate students often have need of the latest materials in their field, usually stemming from a professor's recommendation, particularly around the time for comprehensive examinations; or they may be attempting to "one up" their professor. While libraries usually make materials available on a "rush" basis, obstacles to their retrieval often present themselves to the requesting user; this leads to much grumbling and complaining on both sides. The subject specialist librarian should know the "ins and outs" of the technical departments and can be of great assistance in retrieving needed items. Furthermore, these user contacts are important sources of feedback about the materials students are using and demanding.

By this "ombudsman" function the librarian can be attuned to the problems which users encounter and can convey the nature of these problems to others in the organization in a manner which is collegially supportive of the library's efforts to enhance and increase user satisfaction and, consequently, the sense of professional pride and accomplishment on the part of each member of the library staff. The liaison librarian should, of course, also report back to members of the library staff instances and expressions of user satisfaction and appreciation.

Bibliographical Control and Other Technical Processes

Within the area of bibliographical control and other technical processes, the liaison librarian can play an important role in interpreting the needs of library users. It may be unrealistic to expect librarians acting in this capacity to undertake cataloging assignments, given the constraints of their other responsibilities. Nevertheless, the subject specialist librarian has the responsibility to work with the technical and support group in bringing user experiences and user perspectives into the technical departments. Bibliographical control is an area where extensive cooperation between the subject specialist librarian and the catalog librarian can be developed into a relationship which is mutually beneficial. The subject specialist can convey bits of information regarding the subject matter of the discipline, changes in emphasis, user problems, and cataloging priorities in light of immediate informational needs, to cite just a few examples. The cataloger, on the other hand, can bring to the subject specialist's attention changes in subject headings, cataloging rules, departmental procedures, and gaps in the collection, as well as errors which may occur in the selection process, particularly regarding sets and translations.

A specific example in the area of cataloging can best illustrate the development of collegial cooperation. Indiana University has an active student *Pub-*

lic Interest Research Group, called InPIRG. Students in this group complained that they could not find some "Nader" reports in the card catalog. This complaint was reinforced by the faculty sponsor of InPIRG. A bibliography was prepared of all the works that could be identified as being, in any way, connected with Ralph Nader or his organizations. The problem was brought to the economics and political science cataloger. The cataloger was sympathetic to the students' problem and proposed that, using the bibliography, appropriate added entries be made for all those publications which did not have *Nader, Ralph* as a main or added entry. Each time a new "Nader" item is selected, it is flagged; and, when necessary, the cataloger makes the appropriate added entry.

Examples of this kind of cooperation, particularly in the area of acquisitions and serials as well as bibliographic control, are legion. The point to emphasize is that cooperation and liaison must be internal as well as external. In the development of interactive library services the librarian with liaison or communication responsibilities, works collegially, not only with users, but also with members of the library staff. The perspectives and contributions of colleagues with the library's technical departments are vital to the delivery of interactive library services.

Conclusion

Through the development of linkages between academic departments and the library, the faculty and the students view the library as an organization which is making significant contributions to the missions of instruction and scholarship. The administration of the university learns more about the effectiveness with which the library operates and the level of satisfaction the users experience from faculty and students than through arguments and elaborate presentations by the library administration. Where interactive and responsive services exist, the library is likely to fare reasonably well in periods of austerity.

In an era of budgetary stagnation and retrenchment, subject specialist librarians should be able to make additional contributions. They can convey their perceptions of the needs of the library's publics in the reevaluation of library services and operations. They can contribute the user's view as to the effectiveness and need for certain services. Second, they are in an ideal situation to evaluate honestly and refine the priorities of their collections and make whatever adjustments the fiscal situation warrants, not arbitrarily, but in view of the curricular and research needs of the academic departments and the daily informational needs of their publics. Last, these librarians can make an additional contribution by interpreting library policies regarding collection development and library cooperation and sharing to users. Because of their regular user contacts, it should be their responsibility to communicate the importance of these programs and how they can be used to advantage.

References

1. Maurice Line, "The Case for Information Officers," in John Lubans, ed., *Educating the Library User* (New York: Bowker, 1974), p.383–91.
2. Robert P. Haro, "The Bibliographer in the Academic Library," *Library Resources & Technical Services* 13:163–69 (Spring 1969); and Helen Welch Tuttle, "An Acquisitionist Looks at Mr. Haro's Bibliographer," *Library Resources & Technical Services* 13:170–74 (Spring 1969).
3. The following are relevant articles on subject specialists in academic libraries: Cecil K. Byrd, "Subject Specialist in a University Library," *College & Research Libraries* 27: 191–93 (May 1966), describes the program established at Indiana University; Kenneth Humphreys, "The Subject Specialist in National and University Libraries," *Libri* 13: 29–41 (1967); A. Holbrook, "The Subject Specialist in Polytechnic Libraries," *New Li-*

brary World 73:393–96 (1972); W. L. Guttsman, "Subject Specialisation in Academic Libraries: Some Preliminary Observations on Role Conflict and Organizational Stress," *Journal of Librarianship* 5:1–8 (Jan. 1973), describes many of the organizational problems arising from the establishment of subject specialists; Ann Coppin, "The Subject Specialist on the Academic Library Staff," *Libri* 24:122–28 (1974), provides a brief survey of the literature on subject specialists; Charles A. Crossley, "The Subject Specialist Librarian in an Academic Library: His Role and Place," *Aslib Proceedings* 26: 236–49 (June 1964), provides an excellent list of objectives for subject specialists; Selby U. Gration and Arthur P. Young, "Reference-Bibliographers in the College Library," *College & Research Libraries* 35:28–34 (Jan. 1974); Eldred Smith, "The Impact of the Subject Specialist Librarian on the Organization and Structure of the Academic Research Library," in Evan Ira Farber and Ruth Walling, eds., *The Academic Library; Essays in Honor of Guy R. Lyle* (Metuchen, N.J.: Scarecrow, 1974), p.71–81, summarizes the results of a survey conducted while Mr. Smith was a CLR fellow; Peter Woodhead, "Subject Specialisation in Three British University Libraries," *Libri* 24:30–60 (1974), describes the arrangement at the University College, London; University of Leeds; and the University of Bradford.

4. For a good survey of the collection development role see J. Periam Danton, "The Subject Specialist in National and University Libraries, with Special Reference to Book Selection," *Libri* 17:42–58 (1967).
5. Line, "The Case for Information Officers," p.386.

MARION T. REID

Coping with Budget Adversity: The Impact of the Financial Squeeze on Acquisitions

Effects of budget adversity on acquisitions procedures in research libraries were studied through visits to ten ARL libraries, interviews with more than 100 individuals, a literature search, and consultation of current ARL library annual reports. The findings are reported in three sections: (1) organization and procedures; (2) budget considerations; and (3) selection. The most positive result noted is the speed with which libraries are developing cooperative acquisitions programs.

THE PROBLEM OF REDUCED or virtually frozen library budgets is a national one. Indeed, William S. Dix warns, "This is the day of adversity, and most university libraries are going to have to make do for a while with relatively less money than we have become accustomed to."[1] H. William Axford concurs, urging more efficiency: "Real progress in making the library a vital and dynamic center for inspiration and information . . . cannot be gained during a severe budget crisis unless our labor-intensive organizations can achieve a higher level of manpower utilization than is now generally the case." He further observes, "It is clearly in the interest of the profession and its users that the motivation for change be internal."[2]

If libraries have less money to spend, they are presumably buying fewer titles. Without as many books to process, what are they doing with the acquisitions personnel left? For the most part, there is no leftover personnel. In some cases, technical services staffs were not increased when book budgets were in the 1960s. Acquisitions personnel had more to spend; they began buying books in exotic languages that were more difficult to obtain; their card catalogs and order files became more complex as more entries were added, so more time was required for searching. In other cases, acquisitions staffs have been cut as much as 20 percent—primarily by attrition. In still other cases, libraries have reorganized, shifting positions from acquisitions functions to other areas. Such manpower loss seems to exceed the amount of work lost through budget cuts. So how are acquisitions personnel coping with this situation?

To "take a hard look at the whole sequence of functions and procedures in this area"[3] of acquisitions, the author visited libraries at the following ten universities: Columbia University, Cornell University, the University of North Carolina, the University of Oklahoma, Pennsylvania State University, Purdue University, Southern Illinois University,

Marion T. Reid is head, Order Department, Library, Louisiana State University, Baton Rouge. *The study reported here was made possible through a fellowship from the Council on Library Resources.*

the University of Tennessee, the University of California at Los Angeles (UCLA), and the University of Utah. According to Association of Research Libraries (ARL) statistics from 1969–70 through 1972–73, the total expenditures for books and binding for nine of these schools were reduced at some point or remained virtually static, thus causing a loss of buying power. Although the library at the tenth school—the University of Tennessee—had not suffered financial acquisitions setbacks within the past five years, it was included in the study because it is practicing economies that should be considered by research libraries that are affected by budget adversity. In addition to the information gained from interviews with over 100 people at these ten universities, the author has drawn on information in the literature, thirty current annual reports received from ARL libraries not visited, and personal experience at the Louisiana State University (Baton Rouge) Library.

Organization and Procedures

Several libraries have made organizational changes in an attempt to smooth the flow of work in technical services. Two of them have established groups to act as buffers between acquisitions and cataloging. In one library this group is a section of the acquisitions department; in the other it constitutes an entire department. The primary functions of these groups are to locate Library of Congress card information for titles lacking it and to funnel the books to the proper person or group in the catalog department. One library has a bibliographic search unit which does all searching and verification for acquisitions and for cataloging. To "improve the flow of materials through units, working on backlogs, preparing for automation of processing procedures, processing bulk collections, and serving as a productivity 'yardstick' or procedure evaluation agency and change catalyst to improve methods of handling materials," the UCLA Library established a task force during the 1968–69 year. In 1972 its duties expanded to include collection development and public service assignments. The task force, which was at first under the supervision of the assistant university librarian for systems and technical services, is now a unit of the regular library administrative network with full departmental status.[4]

Staffing

In many acquisitions departments the searching staff is inundated with work during the first fiscal quarter and at loose ends by the end of the year. Two acquisitions librarians stated that, if the searching work load were spread out more evenly during the year, fewer searchers would be needed. Two suggestions for achieving a more even acquisitions work load are: (1) Work out a schedule so (a) the *bulk* of the more difficult-to-obtain items (geographically hard-to-get or bibliographically hard-to-verify) are handled first; and (b) the remainder of the orders to be processed are distributed more evenly over the first half of the fiscal year. (2) Give the acquisitions unit more manpower during its heaviest ordering season by hiring part-time personnel on a temporary basis and/or shifting other library staff to ordering duties on a short-term basis.

To combat the paucity of salary money while being faced with a great amount of work, two libraries have converted each of several vacated professional positions into two support staff positions. Such action requires an evaluation of the remaining professional positions within the department as well as the positions being downgraded so that a general retrenchment of duties occurs, with the most routine tasks delegated to the new support staff.

Two acquisitions departments stress in-depth training of their staffs. Each job can be handled by two or three people. Two people can train others for any support job. Such versatility allows each staff member to understand his department better, and it permits work to continue in spite of professional meetings, illnesses, vacations, and resignations.

Searching Considerations

Stevens suggests verifying entries only for items above average cost, for corporate entries, and for items with difficult personal names.[5] Axford agrees that the main entry should not be established prior to ordering: "A considerable amount of wasted time can be avoided if the acquisitions department confines itself to determining if the library has an item, if it is on order, or if it exists, and leaving the descriptive cataloging to be performed by the catalog department after the item arrives."[6] If the search unit *is* responsible for providing the catalog department with card information (and the majority visited were), then acquisitions personnel should at most look for card information in the two LC/NUC sets in which a card would most likely appear. For example, a 1906 imprint would be searched only in *A Catalog of Books Represented by Library of Congress Printed Cards Issued to July 31, 1942* and in *The National Union Catalog, Pre-1956 Imprints,* while a 1957 imprint would be searched only in *Library of Congress and National Union Catalog Author Lists, 1942–1962* and *The National Union Catalog* for 1963–67. A card search for an out-of-print item should be made only *after* the item's availability is verified or after the book has been received.

Nine of the ten libraries visited estimate the cost of a title whose search reveals no price rather than making an exhaustive search in available tools and/or requesting a price quotation from the publisher. Estimates can be based on average trade prices presented in the most recent edition of the *Bowker Annual.* Instructions accompanying purchase orders to dealers can request notification before shipment if a title is more than the estimate shown, thus safeguarding a library against getting a $300 book for which it expected to pay $15.

Items designated "rush" require special handling and stop the normal flow of work, thereby reducing productivity. Available percentages of rush orders in the libraries visited covered the wide range of 2 percent to 21.6 percent. Perhaps more libraries should consider handling fewer titles on a rush basis.

Approval Plans

In four of the eight libraries that had some sort of approval plan, acquisitions librarians emphatically stated that without an approval plan they would not be able to spend their book budgets. This may seem contradictory—if there is less money to spend, why rely on an approval plan? The chief advantage of an approval plan to an acquisitions area is the savings in paperwork: no purchase orders need be generated, for the necessary slips are supplied in the books. There appears, however, to be little savings in the time taken for review of books supplied on approval. Most of the libraries visited have established a routine for the review of approval books by subject librarians. Such a review seems to remain most valid over a long period of time if subject librarians are required to initial the slips of those books they wish to accept. Thus, all books not reviewed are automatically returned rather than automatically retained.

When determining whether or not to maintain an approval plan, the prime concern should be: Is a library's static book budget large enough to include

that approval plan? Shepard points out that "the key question is whether the amount you have allocated, or might normally spend on a certain subject area, approaches the estimated cost of books published during the year in that subject."[7]

Forms and File Arrangement

Ford points out that the use of forms in acquisitions work "is an important feature in saving time in repetitive, routine operations and in assuring that work is done accurately and as completely as necessary."[8] Two libraries use in-house forms for problem receipts so that receiving clerks can quickly describe for problem-letter writers what is wrong with a book by checking off appropriate items. This practice allows both the receiving clerk and the problem-letter writer to work independently without having to make time for verbal discussion of each problem. One library has adopted the multilingual several-purpose form letter proposed by Shinn to achieve uniformity in exchange communication.[9]

Two libraries have changed their order file from main entry arrangement to title arrangement for greater speed in checking new orders against the order file. It took twenty people five working days to realphabetize 85,000 slips in one of these libraries. Its file is now displayed in open drawers on waist-high tables so that no user wastes time pulling drawers out in order to look at their contents.

Metcalf points out that "a record should not be kept unless in the long run it saves more time or money than it takes to make and use."[10] One library is removing branch library serials information from its serials Kardex record, for branch holdings are already listed on a computer printout. Two of the eight libraries do without any publishers' and/or dealers' catalogs file, relying on existing searching tools and advertisements or catalogs submitted with orders.

Budgetary Considerations

Obtaining Additional Funds from the University

Aside from doing what one university library did—ordering as usual and then cancelling all outstanding orders mid-year when funds are exhausted (a most extreme procedure which is effective as a bargaining tool once at most), it seems that the best possible approach for getting more funds is to assure the university that *any* additional funds given the library will be spent—and then spend any that appear, no matter how late in the fiscal year they are received. One library has a list of priority items already selected so it can spend up to $200,000 extra within a week's time toward the end of the fiscal year.

Dealer Discounts

One library has a bond arrangement with its approval plan dealer whereby the entire approval fund is given the dealer at the beginning of the fiscal year and treated as a deposit account. In return, the dealer gives the library an additional 1 percent discount on approval plan items. Another library bargains with out-of-print booksellers for a discount, assuring a certain amount of business in a given year in exchange for a given discount. One library is using the same dealer for approval plan and continuations as a bargaining point for higher discounts.

Encumbrances

Several public-service area librarians with small funds expressed deep concern that encumbrances from the past fiscal year are being reencumbered against their funds for the present fiscal year. This charges such funds twice for each book not received during the year in which it was ordered. One effective solution offered is that all remaining en-

cumbrances for books ordered during the prior year be deducted from the total book budget at the beginning of the new year and that the remainder then be divided among existing funds.

Serials Economies

The following trends have appeared in reaction to ever-increasing serials commitments: (1) Four of the libraries visited conducted organized reviews of their current serials, with an eye to removing duplicates and/or cutting off any fat that had accumulated during the more lucrative 1960s. (2) Four libraries dissolved their serials budgets by attributing each serial title to a subject fund and giving that fund an appropriate portion of the serials budget to cover the cost of that title. This action makes each subject fund coordinator responsible for cutting old titles to obtain money for ordering new ones. (3) Two libraries notify the appropriate subject bibliographer if a serial titles cost increases drastically. The next renewal is not honored unless that bibliographer has approved continuation.

Gifts and Exchanges Economies

Various libraries make money on unwanted duplicates by selling them to dealers on a bid basis; giving runs of serials to out-of-print dealers in exchange for credit; and selling them to their own faculty and students or to other libraries at bargain rates.

Galejs points out that "libraries should not ignore the possibility of exchanges as a means of serial acquisitions —especially in periods of austerity and reduced funds."[11] One of the libraries visited is converting as many serials as possible from purchase to exchange.

Librarians faced with meager rare book budgets might follow the method used at the Washington University (St. Louis) Library to build its special collection of modern literature. Matheson points out that this library has developed a most valuable collection with very little capital outlay by purchasing books by and requesting literary papers of contemporary writers and poets designated by consultants as people "whose abilities they particularly respected and who they felt stood a good chance of being important in fifty years."[12]

Other Economies

Several libraries have realized savings in other budget areas in order to maintain or add to their book budgets. One library puts book replacement fees directly into the book replacement fund. If a processing charge is added to the cost of the lost book (one library adds a $5 processing fee; another adds $9), this provides a considerable amount of replacement money. Another now contracts its supplies and binding on an annual bid basis. Two libraries are revising their binding requirements to stretch the binding dollar, using cheaper, light adhesive bindings for some titles and having others bound as they are.

Postage Savings

Some postage-saving practices are: Using light-weight stationary for airmail letters; using aerograms for foreign correspondence not typed on form letters and without enclosures; batching correspondence and sending it on a weekly basis; sending all domestic rush orders airmail *except* those mailed on Thursdays and Fridays; sending no domestic correspondence by airmail; and using postcards for serials claims and catalog requests.

Selection

Bruer, in his 1973 review of acquisitions, suggests that a new emphasis on collection development "seems to symbolize the response by acquisitions librarians to the strained budget conditions of recent years."[13] Reduced budgets are forcing changes in selection per-

spective and level of expectation. Collection development is harder; for although the same quantity of literature must be considered, fewer items may be purchased. Blanket orders are being reviewed annually. Sale and remainder catalogs are used more heavily. Some libraries are ordering reference books on an every-other-edition basis as suggested by Strain.[14] More microforms are being purchased in the interest of economy.

Library administrators expressed grave concern about what the diminishing budget is doing to quality education. A library cannot be a viable research institution if it provides everyday instructional materials alone. Special collections—the research library's most important area—cannot be measured in immediate productivity and may, therefore, be sacrificed for immediate instructional needs, which must be met first. Lyman urges coordination in any dismantling of collections, for "if the job is done on an individual basis, each institution thinking only of its own programs and assuming that no one else is contemplating cutting back in the same area of study, the results will be very bad."[15]

To keep special collections support reduction to a minimum while meeting current patron needs, research libraries are turning to cooperative programs. Eight of the ten libraries visited practice some means of cooperative acquisitions. These vary from a simple exchange of main entry cards between two libraries to the sophisticated coordinated acquisitions program being developed by the Research Libraries Group. Members of the Center for Research Libraries are becoming more dependent upon that center for little-used titles. Dix states that "it is becoming increasingly clear that one of the most promising means of slowing the growth of library costs is the sharing of resources among institutions."[16]

Summary

Librarians are examining structural organization, work procedures, budgetary operations, and selection practices, seeking the most economical measures in this financially bleak era. Such self-examination should be done on a continuing basis to assure that library operations are as streamlined as possible. However, a library can reach a point of efficiency beyond which it can recognize no great budgetary savings. If the internal efficiency is maximized, the only economy measures that can be made are cooperative ones. Perhaps the most valuable result of budget adversity is that it is forcing the still quite imperfect national network of research libraries to emerge as a "coherent, integrated whole"[17] much more rapidly than it would have, had libraries continued to receive the kind of financial support they did in the 1960s.

References

1. William S. Dix, "Reflections in Adversity; or, How Do You Cut a Library Budget?" [Louisiana State University] *Library Lectures*, nos. 17–20 (1972), p.10.
2. H. William Axford, "Performance Measurement Revisited," *College & Research Libraries* 34:250 (Sept. 1973).
3. Ashby J. Fristoe and Rose E. Myers, "Acquisitions in 1971," *Library Resources & Technical Services* 16:173 (Spring 1972).
4. Roberta Nixon, "UCLA Library Task Force," *Library Resources & Technical Services* 18:289–90 (Summer 1974).
5. Rolland E. Stevens, "The Relationships of the Acquisition Department to the Library's Total Program," in Herbert Goldhor, ed., *Selection and Acquisition Procedures in Medium-Sized and Large Libraries* (Champaign, Ill.: Univ. of Illinois Graduate School of Library Science, 1963), p.133.
6. Axford, "Performance Measurement Revisited," p.255.
7. Stanley A. Shepard, "Approval Books on a Small Budget?" in Edmond L. Applebaum, ed., *Reader in Technical Services*

(Washington, D.C.: NCR Microcard Editions, 1973), p.74.
8. Stephen Ford, *The Acquisition of Library Materials* (Chicago: American Library Assn., 1973), p.172–73.
9. Isabella E. Shinn, "Toward Uniformity in Exchange Communications," *Library Resources & Technical Services* 16:502–10 (Fall 1972).
10. Keyes D. Metcalf, "The Essentials of an Acquisition Program," in Edmond L. Applebaum, ed., *Reader in Technical Services* (Washington, D.C.: NCR Microcard Editions, 1973), p.57.
11. John E. Galejs, "Economics of Serials Exchanges," *Library Resources & Technical Services* 16:519 (Fall 1972).
12. William Matheson, "An Approach to Special Collections," *American Libraries* 2: 1151 (Dec. 1971).
13. J. Michael Bruer, "Acquisitions in 1973," *Library Resources & Technical Services* 18:239 (Summer 1974).
14. Paula M. Strain, "What to Do if the Money Goes," *Sci-Tech News* 27:38 (Summer 1973).
15. R. W. Lyman, "New Trends in Higher Education: The Impact on the University Library," *College & Research Libraries* 33: 301 (July 1972).
16. William S. Dix, "The Financing of the Research Library," *College & Research Libraries* 35:256–57 (July 1974).
17. Ibid., p.255.

ON OUR COVER

The independent research library, represented here by the Newberry Library, was a characteristic product of the philanthropic motivations that have enriched American library resources from the John Carter Brown and the Folger in the East to the Huntington and the Hoover in the West. The Newberry endowment was the richest up to its time, overshadowing the famous Astor fund of mid-century.

Although the Newberry well represents the privately endowed research library, its new building, occupied in November 1893, was a radical departure from traditional library structures. It was the embodiment of the years of thought that its librarian, William Frederick Poole, had given to ways of avoiding the wastefulness and inefficiency of the monumental libraries of the past. Taking account of new materials available to provide flexibility and scorning architectural display at the cost of convenience, the plans provided rooms with substantial natural light and ventilation but without the enormously high ceilings and ornate lobbies of the past. Service was to be offered in subject collections staffed by academically qualified specialists and housed on open shelves accessible to the users. The coupling of these ideas, a flexible building housing subject-oriented collections, took a half century to be adopted widely, but the concept largely began with this building.

The Spanish Romanesque structure itself was the work of a young architect, Henry Ives Cobb, who was employed by the Newberry trustees to serve them exclusively during the early years. Constructed of Connecticut granite, the building was 300 by 60 feet and four stories high. It was projected as only the first side of a future four-sided hollow square to occupy the whole of a city block.

The plan of service, requiring the employment of a large staff of highly qualified and consequently expensive department heads, proved uneconomical for a clientele that, by its concentration upon serious study, was limited in number. The $550,000 spent for the building and the $250,000 spent by 1893 for books made the rich endowment seem no longer limitless. As a result, the original plans for quadrupling the size were never carried out. Yet the building has been sufficiently adaptable that only after eighty years has a major addition become an absolute necessity. The original structure will continue to serve as an integral part of a handsome showplace for the rich collection.—*W. L. Williamson, Professor, University of Wisconsin-Madison.*

TIAA Announces the Lowest Cost Life Insurance for Your Age...

...compared with what you'd pay for the same individual policies from insurance companies selling to the general public. That's not exactly a revelation for most educators, of course. They already know that TIAA is traditionally their best buy in life insurance. What's news is that...

New, lower premium rates now apply to TIAA policies issued beginning October 1, 1975.

In addition, with "quantity savings" dividends,

Net costs are less than ever before for the larger size policies educators are purchasing these days.

To illustrate the effect of the new rates and dividend scales, **A $100,000 20-Year Decreasing Term Insurance policy costs just $122 for a man aged 30 or for a woman aged 35.**

Here are premium and dividend figures for this policy issued at different ages:

Age at Issue MALE / FEMALE	25 / 30	**30 / 35**	35 / 40	40 / 45	45 / 50
Annual Premium (Payable only 18 years)	$187	**$235**	$328	$487	$747
Cash Dividend End of First Year*	97	**113**	142	188	265
First Year Net Payment	$ 90	**$122**	$186	$299	$482

**Subsequent yearly dividends will be in the same amount, according to TIAA's current dividend scale which is not guaranteed.*

Decreasing Term policies provide their largest amount of protection initially, reducing by schedule over the years to recognize diminishing insurance needs and increasing savings, retirement benefits, etc. TIAA issues such policies for 15, 20, 25 and 30 year periods, depending upon age. Decreasing Term insurance is available in amounts of $20,000 or more to persons under age 56.

Eligibility for TIAA policies is extended to persons employed (full-time or part-time) by colleges, universities, private schools, and certain other nonprofit educational or scientific institutions, and to the spouse of the employee when more than half of their combined earned income comes from such an institution. Individuals can purchase low cost TIAA life insurance regardless of whether their college or other eligible employer participates in a TIAA benefit plan. Policyowners can retain their TIAA plans without any change in policy provisions whether they stay in educational work or not.

Note to present TIAA policyowners. Although the new premium rates do not apply to policies issued prior to October, dividends will be adjusted to provide equitable treatment for similar policies issued under different rate bases.

Two Convenient Ways to Get More Information...

Either call collect...
the TIAA LIFE INSURANCE
ADVISORY CENTER—(212) 490-9000.

If you want *immediate* answers to your questions about TIAA's low cost life insurance policies call and ask for one of these Insurance Counselors:

Alan Fox, C.L.U. *Joan Scott, C.L.U.* *David Zacher*

Or send...
this coupon to receive information by mail.

Life Insurance Advisory Center
TEACHERS INSURANCE
AND ANNUITY ASSOCIATION
730 Third Avenue, New York, N.Y. 10017

Please send me a personal illustration of TIAA policies issued at my age based on the new, lower premium rates. I understand this request places me under no obligation, that no one will call on me and that the information will be sent by mail.

B/576

Name and Title

Address

City, State, Zip

Date of Birth

Nonprofit Employer (college, university, private school, etc.)

TIAA CREF *The College World's Insurance Company*

COLLEGE & RESEARCH LIBRARIES

Recent Publications

BOOK REVIEWS

Barr, Keith, and Line, Maurice, eds. ***Essays on Information and Libraries.*** Festschrift for Donald Urquhart. Hamden, Conn.: Linnet Books, 1975. 211p. (LC 75-11651) (ISBN 0-208-01370-9)

Donald Urquhart, for whom this festschrift was prepared, comes through in strong outline, if not full portrait, in the several contributions by his colleagues, principally, but not entirely British. It was fortunate that the editors had available, and chose as the first contributions, the doctoral honorary degree presentations from Heriot-Watt University, the University of Salford, and from the University of Sheffield, this last where he earned a doctorate in metallurgy in 1938. While most of his colleagues chose to write about his chief contributions which were the establishment, development, successful operation, and enlargement of mission of the National Lending Library for Science and Technology, his many other contributions are not slighted. Coming through most clearly are his challenge to orthodox librarianship and the changes in outlook and subsequent work of the Library Association of which he not only became a member, but president for two years, and a moving spirit for the betterment of the profession and of library services which he and the association espouse.

American librarians, in spite of, or because of, the size and strength of our country, tend to believe that all, or at least most all, advancement in our fields of competence occur here. The fact that they have not may disturb us momentarily. Donald Urquhart's contribution to the profession, however, may hopefully stimulate us to thought and to acceptance and emulation of his very direct attack on problems which

plague us now, as they plagued his country.

In addition to a description of the solutions to provision of scientific literature quickly to those who need it, the festschrift contains some chapters not directly related to his endeavors, but as tribute offerings in his honor. Particularly useful to this reviewer were those of Donald Urquhart's successor, M. B. Line, on "Demystification in Librarianship and Information Science," and B. J. Enright's "Bibliochlothanasia: Library Hygiene and the Library."

Since a festschrift is a very personal kind of work, a review of it may be excused for being personal also, if only because the reviewer had the opportunity in 1964 with other ARL Board members to meet with Dr. Urquhart, and to have a personally conducted tour of the young NLLST and an explanation of its origins, its workings, and a glance into the future. The only regret remaining is that a continuing personal association could not have developed on that base. But Seattle is a transpolar flight from London and Boston Spa. A substitute in the form of reading, as they appeared, of most of Donald Urquhart's library and information journal articles, is only second best to continuous dialogue with him.

One can only envy those individuals in the United Kingdom and his European colleagues who had the privilege of closer and more intimate professional association.

Having once been ill served by the publication of a book in poor format, this reviewer can comment on the poor format of this festschrift in honor of Donald Urquhart. The type face is so small that it takes some dedication to the task, or extreme interest in Donald Urquhart, to read the fine print and to turn the stiff pages. Yet it was worth the effort to work through to the end because the subject is worth that effort.—*Marion A. Milczewski, Director of Libraries, University of Washington Libraries.*

Duckett, Kenneth W. ***Modern Manuscripts: A Practical Manual for Their Management, Care and Use.*** Nashville, Tenn.: American Association for State and Local History, 1975. 375p. $16.00. (LC 75-5717) (ISBN 0-910050-16-3)

It is a pleasure to begin this review by saying that Ken Duckett has indeed written a very good book about manuscripts. As its title indicates, it is about modern manuscripts, and its "scope is limited to manuscripts of the seventeenth century to the present." The preface points out that the book is a manual "directed toward the novice curator" and that "it is intended to serve as a practical guide, not as an exposition of theory." The author is considerate in pointing out that his research terminated on January 1, 1974, and that he was, therefore, unable to include information which appeared after that date.

The book is organized so that after an introduction by William T. Alderson, the executive secretary of the American Association for State and Local History, and a preface by Duckett, the first chapter presents a "Survey of Manuscript Collecting." It is followed by chapters on administration; acquisitions: the mechanics and ethics; physical care and conservation; establishing bibliographic control; information retrieval: automation, the computer, and microphotography; nonmanuscript material; use of collections; and public service. These nine chapters are followed by three appendixes, the first of which presents plans for a records center carton and for a flat-storage manuscript box; the second is a table of equivalents (cartons, Hollinger boxes and other containers, and their cubic-foot capacities; pages per box or per other container; carton and container weights; reduction ratios and reel/cassette viewing times); and the third is a perpetual calendar. These appendixes are followed by a "Directory," which is a guide to associations, publications, equipment, supplies, and service; by "Facsimilies—a list of items more commonly reproduced"; and then by the notes, which are quite excellent. After the notes comes a "Glossary of Selected Terms," then an extensive bibliography (twenty-five pages, with the items listed alphabetically by author). The volume concludes with an index.

The book is well written, accurate, and useful. Duckett's suggestion that it is "directed toward the novice curator" is far too modest an appraisal. There is much here that will be of value to all curators, from the most experienced to the beginner, for while the beginner will get his start here,

the experienced professional will find this both an excellent place to review or to "brush up" and to begin an extended study of a particular phase of his vocation. A minor annoyance to this reviewer is the form in which the notes appear: only author, title, and the particular page or pages are listed. To get the full citation involves an unnecessary, separate trip to the bibliography, where the author entry must be checked.

This minor matter aside, Fred C. Cole and the Council on Library Resources (who supported the research); the Association for State and Local History, which published the volume; and most of all Ken Duckett, are to be congratulated for producing this very fine addition to library and archival literature.—*Clyde C. Walton, Northern Illinois University.*

Cowley, John, ed. ***Libraries in Higher Education: The User Approach to Service.*** Hamden, Conn.: Linnet Books, 1975. 163p. $11.50. (ISBN 0-208-013710-7)

Libraries in Higher Education is not, as the title implies, a study of libraries in all institutions of higher education, but is actually a series of essays by the staff of the North London Polytechnic reflecting the special concerns of polytechnic libraries. The British polytechnic institution as it stands today exists as a counterbalance to the university in the British system of higher education. First defined in a 1966 White Paper, entitled *A Plan for Polytechnics and Other Colleges,* which initiated their formation through amalgamation of colleges of commerce, technology, design, and art, the polytechnics have swiftly evolved into institutions which satisfy the utilitarian needs of society, offer scheduling more flexible than that of the universities in order to meet the needs of the mid-career student, and now are beginning to move toward research and the liberal arts.

The introductory essay in the volume by the editor gives a brief survey of the evolution of the polytechnic as an institution; but it is somewhat difficult for the non-British librarian unfamiliar with the traditions of British higher education and its attendant acronyms.

The volume proper is divided into two parts: "Promoting Library Use" and "Subject Specialisation." Part one includes chapters on "Organising for Reader Services," "Public Relations and Publicity," "Non-print Media," and "Teaching Library Use." While these essays are sincere descriptions of the working situations of librarians attempting to render quality service with insufficient funding, they tend to be reiterations of topics that have received more extensive and better treatment elsewhere in the professional literature. That is, they spring from the need for polytechnic librarians to describe services they render, but they do not dwell on the polytechnic experience per se as much as on the problems that beset librarians everywhere.

The last essay in part one, "Teaching Library Use," is of particular interest because it does attempt to delineate the British experience and the polytechnic approach to library instruction. In this article Nancy Hammond discusses the two distinct types of reader instruction that have developed in the polytechnic: that of the tutor-librarian responsible for all library instruction throughout the institution and that of the subject specialist who teaches in his or her area of expertise in addition to other duties.

The second part of this book, "Subject Specialisation," outlines the activities of the subject specialist: provision, exploitation, teaching library use, and professional awareness. The specialist is a member of the library staff designated to develop one or more aspects of a library's collection and the array of services connected with it.

While *Libraries in Higher Education* gives some insight into the polytechnic situation, its lack of focus on the specific experience and emphasis on general library problems undercut its usefulness. As source material for students it is of minimal value because of its scanty unclassified bibliography and omission of bibliographical footnotes and index. Because very little literature exists on the polytechnic library, this volume will provide an elementary introduction to the subject until a more comprehensive study is written.—*Kathleen M. Heim, Director of Public Services, Rebecca Crown Library, Rosary College, River Forest, Illinois.*

Dunkin, Paul S. ***Bibliography: Tiger or Fat Cat?*** Hamden, Conn.: Archon Books, 1975. 120p. $7.50. (LC 75-5634) (ISBN 0-208-01519-1)

Paul Dunkin's final book (unless there is a manuscript to be published posthumously) leaves us continuing evidence of his concern for bringing a degree of common sense to the often tortuous task of combining the esoterica stemming from the physical characteristics of a book with the usually more mundane record which declares that a book exists and is available for use.

Ranging through the spectrum separating the bibliographer and the cataloger, here is a relaxed observer commenting randomly on such diverse and familiar aspects of bibliography as cast-off copy, press figures, and skeleton forms—intermingled with doubts as to the wisdom of the *ISBD* and musings on what bibliographers will make of the new printing with computer and film.

A major portion of the slim volume consists of quotations from many of the bibliographers' "greats," assembled and juxtaposed to demonstrate discrepancies, inconsistencies, and contradictions among them which have piqued the author's interest; one can enjoy the sound of the quiet popping of pricked balloons as Dunkin comments on some of the hypotheses of bibliothecal Perry Masons which he feels are too feebly supported by fact.

Although Dunkin purports to be writing for the armchair bibliographer (even defining "justification" for the novice), this book will interest largely those with background in bibliography, and who in turn can add their comment to the reflections of the author—and who will argue with the author's contention that one of the most important uses of bibliography is "certainly in better cataloging."

Oh, yes: "Tiger or Fat Cat?" As Dunkin says, "Who cares?"—*C. Donald Cook, Faculty of Library Science, University of Toronto.*

Cook, Margaret G. ***The New Library Key.*** 3d ed. New York: H. W. Wilson Co., 1975. 264p. $5.00. (LC 75-11754) (ISBN 0-8242-0541-3)

Downs, Robert B., and Keller, Clara D. ***How to Do Library Research.*** 2d ed. Urbana: Univ. of Illinois Pr., 1975. 298p. $3.45 Paper. (LC 74-28301) (ISBN 0-252-00449-3; 0-252-00535-X pbk.)

The titles of these two resource guides for the serious and intelligent layman might better be exchanged: Margaret Cook's manual is, in fact, a sensibly explained "how to," while Downs and Keller's book describes more than twice as many reference "keys" (some fifteen hundred to Cook's seven hundred), but without placing them in a practical research context.

Both works are revisions. The previous edition of *The New Library Key* appeared in 1963 and can be traced back to 1928 when its predecessor, Zaidee Brown's *The Library Key* first came out. *How to Do Library Research,* by Robert B. Downs, assisted by Elizabeth C. Downs, was published originally in 1966. The current editions of both guides include new and revised material into 1974. Only Cook, however, mentions, but declines to evaluate, *Britannica 3* and considers the *Social Sciences Index* and *Humanities Index* as two separate Wilson publications. Although both books discuss *Dissertation Abstracts International,* neither notes the monumental *Comprehensive Dissertation Index,* published in 1973. A random sampling of entries indicates that both guides have been carefully revised with many new works and editions cited and obsolete ones deleted. Cook has increased the total number of entries by one-third from the second to the third edition; Downs and Keller have added nearly half again as many titles in chapters 1 through 12 as were in the earlier edition with more than twice as many pages now devoted to specialized subject reference books (chapter 13).

Margaret Cook views the library as a complex yet fathomable whole and the act of research as a logical process within that whole. The product of this attitude is a wide-ranging yet well-organized guide in the true sense of the word. She defines her audience in broad terms to include everyone from college freshmen to "individual adults who have not had previous opportunities to become acquainted with the ever-

growing services of libraries" (preface). To meet the needs, both conscious and unconscious, of this vast group, Cook focuses on the organization and services of the typical college library, on the characteristics of various types of reference materials, and on particularly important tools in six major areas: the arts; geography, archaeology, and history; the social sciences; literature; the sciences; and mythology, religion, and philosophy.

Proceeding on the very sound assumption that nothing about libraries is common knowledge, Cook manages to define everything from dust jacket to bibliography in a clear and succinct manner. In a tone that is instructive without being didactic, she takes time to explain points which many authors ignore: little mysteries such as how to tell the main entry of a work from the indentions on the catalog card, how decimal numbers are arranged on a shelf, or why encyclopedias seem to date so quickly. Emphasis is repeatedly placed on the concept of classification, in a separate chapter devoted to that topic and again in introducing reference tools of different kinds and fields. On several occasions Cook acknowledges the complexity of a particular practice, for example, filing rules, and encourages her readers to seek assistance.

An outstanding feature of this guide from a pedagogical standpoint is Cook's logical approach to research strategy. Without claiming that there is only one right way to investigate a topic, she advocates the use of dictionaries and encyclopedias, followed by periodical indexes and general and specialized reference sources. Chapter 3, "Writing a Research Paper," offers a number of practical suggestions on notetaking and details of format.

Cook's annotations are not only descriptive and evaluative, comparing and contrasting similar tools, but often afford insights into why a particular tool is especially valuable, as when she comments that Moulton's *Library of Literary Criticism* is "a remarkable source of information on changing literary tastes."

Some curiosities of arrangement and inclusion should be noted about Cook, however. She intentionally omits specialized guides and bibliographies in the major disciplines, concentrating instead on "fact finders." To provide some additional help to the more advanced student, she offers another ninety-six items in two appendixes. The guide is indexed by author, title, and subject.

Downs and Keller's book is much more easily described, being a mini-Winchell of English language reference works in virtually all fields of contemporary interest. The first chapter, "America's Libraries," includes a handy list of one hundred major U.S. academic and research libraries, giving the holdings and significant strengths of each. Other introductory material concerns the organization of libraries, the card catalog, and classification schemes. Explanations in all cases are adequate but cursory and apparently unchanged from the 1966 edition, except for the updating of statistics. Chapter 3, "Practical Use of Reference Books," turns out to be no more than a demonstration without comment of the infinite variety of reference tools which exist and reference questions possible. An appropriate source is given for each hypothetical question, but without indicating that many other tools might serve equally as well.

Subsequent chapters are titled "Books about Books," "The Periodical World," "The Nonbook World," "Books about Words," "Books about Places," "Books about People," "Covering the World" (encyclopedias), "The Literary World," "The Historical View," and "Specialized Subject Reference Books." These are subdivided by scope of the sources entered. Annotations are brief and descriptive only, and pagination is given for one-volume works. Tools dealing with government documents appear in "Books about Books" (Cook lists them under nonbook materials). Works relating to both popular and academic subjects are covered in the final chapter. There is an author-title-subject index.

Two things are necessary for the enlightened use of library resources: an awareness of what information exists and some sense of how to discover it. Both these guides address the former requirement, and insofar as Downs and Keller describe a greater number of sources, theirs is the more helpful work. Only Cook, however, deals squarely and perceptively with the matter

of efficient use. Her book can be highly recommended as a basic text for both class and self-instruction.—*Mary W. George, Harlan Hatcher Graduate Library, University of Michigan.*

Oluwasanmi, Edwina; McLean, Eva; and Zell, Hans. ***Publishing in Africa in the Seventies.*** Proceedings of an International Conference on Publishing and Book Development held at the University of Ife, Ile-Ife, Nigeria, 16–20 December 1973. Ile-Ife, Nigeria, Univ. of Ife Pr., 1975. 377p. cloth $16.50; paper $10.50.

This volume is not merely concerned with publishing in the narrow sense but also writing, reading, and librarianship. Most of the contributors to the volume are from Nigeria.

The conference recommendations, eight in all, follow the brief introduction; there next appear summaries of conference papers, twenty-six of them; the contributed papers, presumably in full (twenty-one in all); appendixes of more or less formal speeches; and, finally, a good index. To most readers of this journal, only a few of the names will be familiar in a list of one hundred participants which included the distinguished novelist, Chinua Achebe.

The discussion, rather repetitious, deals with the history of missionary presses, state publishing houses, and academic presses. Particularly noteworthy is the lengthy essay by S. I. A. Kotei of the Department of Library Studies, University of Ghana, on "Some Cultural and Social Factors of Book Reading and Publishing in Africa."

Unfortunately, there is no explicit discussion of the economic role of expatriate publishing houses in Africa. Keith Smith in "Who Controls Book Publishing in Anglophone Middle Africa?" *Annals of the American Academy of Political and Social Science* 421:140–50 (Sept. 1975), provides preliminary data on his investigations.

The significant result of this conference on publishing in Africa in the 1970s was the start of two serial publications, both edited by Hans Zell in England: the biannual *African Books in Print* (London: Mansell, 1975–), updated by the quarterly *The African Book Publishing Record.*

This volume is well produced and will be read and referred to in years to come, not only by students of librarianship and publishing (for example, see Thomas Lask, "Program Is Established at Hofstra [University] to Teach Courses on Book Publishing," *New York Times,* Oct. 21, 1975, p.40), but by persons concerned with developments in the Third World.—*Hans E. Panofsky, Curator, Melville J. Herskovits Library of African Studies, Northwestern University Library, Evanston, Illinois.*

Beeler, Richard J., ed. ***Evaluating Library Use Instruction: Papers Presented at the University of Denver Conference on the Evaluation of Library Instruction, December 13–14, 1973.*** Library Orientation Series, no. 4. Ann Arbor: Pierian Pr., 1975. 97p. (LC 75-677) (ISBN 0-87650-062-9)

That many librarians are involved in programs of library instruction, and are experimenting with a wide variety of approaches, is evident from the many articles, conferences, and workshops devoted to the subject. However, less readily available is information about program evaluation. This collection of seven papers provides a step toward remedying the situation.

There is general agreement among the papers' authors that objectives are a prerequisite for evaluation design and development and that accountability to management is an important function of evaluation. Of interest to readers as well will be the range and diversity of topics covered. Emphasis is placed on the evaluation of instructional, and not orientation, programs.

The first paper is by Thomas Kirk, science librarian at Earlham College and chairman of the ACRL Bibliographic Instruction Task Force. Although structurally flawed, the paper is one that should be read by all who are, or will be, involved in the evaluation of instructional programs. He reviews past research, provides critical discussion of evaluation attempts and studies of selected instructional programs, and provides some practical suggestions.

The second paper, by Richard R. Johnson, experimental psychologist and program manager for the Exxon Education Foundation, deals with the purposes and methodology of data collection.

The remaining papers—with the exception of the one by Rowena Weiss Swanson dealing with questionnaire design—provide summaries of specific instructional program studies. These papers were presented at the conference by a group of panelists which included Patricia Culkin, Betty Hacker, Richard Stevens, John Lubans, and Marvin Wiggins. Their findings will be helpful to those who are planning programs of library instruction or instruction evaluation. For example, one item worthy of note is the students' apparent preference for mediated instruction to asking librarians for help (Kirk, p.7; Culkin, p.43; Lubans, p.76).

The reader will also find helpful the occasional citations to selected readings, sample questionnaires, and tabulated study results that accompany the papers in this anthology.—*Peter P. Olevnik, Head of Reference, Drake Memorial Library, SUNY College at Brockport, New York.*

Foster, Donald L. ***Managing the Catalog Department.*** Metuchen, N.J.: Scarecrow, 1975. 209p. $6.50. (LC 75-19081) (ISBN 0-8108-0836-6)

The reader of this "how-to-manage" volume may feel that there is more here than he or she wanted to know, but there is scarcely a word that the manager does not need to know. The book is packed with information on modern management, theory and practice, appropriate to the large or small library department.

While the catalog department is often considered the most structured department in the library, and the author does consider the traditional department, the elements in its administration differ very little from those in other areas of technical and readers' services. The title could well have been *Managing a Library Department with Special Reference to the Cataloging Operation.*

In the past, many believed that an efficiently operating flow of work from receipt to shelf-readiness of materials, with appropriate bibliographic records prepared and distributed, constituted good management. Of course, there was concern for the people performing the work, but it involved some mixture of biddable staff members with an innate or somehow-learned ability in human relations on the part of the manager.

With revision in attitudes toward work, life-style, and commitment resulting from the realization of the individual's legal and moral rights and psychological needs, the organization of the work-flow has become relatively simple in comparison to the complications of the human elements to be reckoned with in its accomplishment.

The department head, responsible to the library administration, the staff, the work, the patrons, the profession, and to himself, must "delegate authority, motivate others, maximize skills, and upgrade performance standards," while making it clear to everyone in and outside the department who is in charge. Mr. Foster, in terse phraseology and a near-absence of jargon considers all the elements of leadership, from staff recruitment through adjustment to change, in seven of the ten chapters. Along with the first three chapters on the modern department, the department head, and current issues in cataloging, Mr. Foster has managed

to provide a checklist with commentary on all the essentials of managing. How to construct a department manual, work with a consultant, analyze systems, and face a computer are included along with all the other tools, techniques, and activities which determine accountability.

This is an invaluable contribution certainly for the new administrator, but perhaps even more for the seasoned department head who has lived through, but not always well, the changes in personal attitudes and must continue to exert every talent and skill to do what must be done for goal fulfillment under present economic restrictions.

No longer is there the excuse that books on management are provided only by the business field. Library department heads now have one of their own.—*Dorothy P. Ladd, Associate Director for Technical Services, Boston University Libraries.*

OTHER PUBLICATIONS OF INTEREST TO ACADEMIC LIBRARIANS

American Dissertations on Foreign Education, a Bibliography with Abstracts. vol. 7, *Korea.* Comp. by Franklin Parker and Betty June Parker. Troy, N.Y.: Whitston, 1976. 250p. $12.00. (LC 73-155724) (ISBN 0-87875-082-7)

American-Southern African Relations: Bibliographic Essays. Comp. by Mohamed A. El-Khawas and Francis A. Kornegay. Westport, Conn.: Greenwood, 1976. 188p. $11.95. (LC 75-25331) (ISBN 0-8371-8398-7)

Annual Index to Popular Music Record Reviews 1974. By Andrew D. Armitage and Dean Tudor. Metuchen, N.J.: Scarecrow, 1976. 597p. $20.00. (LC 73-8908) (ISBN 0-8108-0865-X)

Arts and the Handicapped; An Issue of Access. A Report from Educational Facilities Laboratories and the National Endowment for the Arts. New York: Educational Endowment for the Arts, 1975. 79p. $4.00, prepaid. (LC 75-27022)

Audiovisual Market Place 1976. New York: Bowker, 1976. 394p. $19.95. (LC 69-18201) (ISBN 0-8352-0838-9)

Bäuml, Betty J., and Bäuml, Franz H. *A Dictionary of Gestures.* Metuchen, N.J.: Scarecrow, 1975. 284p. $11.00. (LC 75-3144) (ISBN 0-8108-0863-3)

Blackey, Robert. *Modern Revolutions and Revolutionists; A Bibliography.* Santa Barbara, Calif.: ABC-Clio, 1976. 257p. $15.75. (LC 75-45301) (ISBN 0-87436-223-7)

Brewster, John W., and McLeod, Joseph A. *Index to Book Reviews in Historical Periodicals, 1974.* Metuchen, N.J.: Scarecrow, 1975. 527p. $17.50. (LC 75-18992) (ISBN 0-8108-0818-8)

Burk, Janet L., and Hayes, Stephen. *Environment Concerns: A Bibliography of U.S. Government Publications, 1971–73.* Kalamazoo, Mich.: New Issues Press, 1971. 208p.

Castagno, Margaret. *Historical Dictionary of Somalia.* (African Historical Dictionaries, no. 6) Metuchen, N.J.: Scarecrow, 1975. 243p. $9.50. (LC 75-25681) (ISBN 0-8108-0830-7)

Consumers Index to Product Evaluations and Information Sources. 1974. Ann Arbor, Mich.: Pierian Press, 1974. 202p. (LC 74-25361) (ISBN 0-87650-057-2) (With quarterly index, $25.00 a year)

Davis, Melinda D. *Winslow Homer: An Annotated Bibliography of Periodical Literature.* Metuchen, N.J.: Scarecrow, 1975. 138p. $6.00. (LC 75-29243) (ISBN 0-8108-0876-5)

De Sola, Ralph. *Worldwide What and Where; Geographic Glossary and Traveller's Guide.* Santa Barbara, Calif.: ABC-Clio, 1975. 720p. $27.25. (LC 74-82038) (ISBN 0-87436-147-8)

A Dictionary of Collective Nouns and Group Terms. Comp. by Ivan G. Sparkes. Detroit: Gale, 1975. 191p. $15.00. (LC 75-4117) (ISBN 0-8103-2016-9)

Directory of Franchising Organizations, 1976. New York: Pilot Books, 1976. 64p. $2.50, postpaid. (LC 62-39831)

La documentation et ses langages; Rapport des travaux du premier congrès tenu à Quebec, du 2 au 5 Octobre 1974. Montreal: ASTED, 1975. 82p. $4.00

Documentation Newsletter. Ithaca, N.Y.: Cornell University Libraries, 1975– . Biannual

Drug Abuse Bibliography for 1974. Comp. by Charles W. Triche, III, and Diane S. Triche. Troy, N.Y.: Whitston, 1976. 450p. $18.00. (LC 79-1165588) (ISBN 0-87875-077-0)

Encyclopedia of German-American Genealogical Research. By Clifford N. Smith and Anna P-C. Smith. New York: Bowker, 1976. 273p. $35.00. (LC 75-28205) (ISBN 0-8352-0831-1)

Foreign Affairs Bibliography, 1962–1972. New York: Bowker, 1976. 921p. $42.50. (LC 75-29085) (ISBN 0-8352-0784-6)

Forget, Louis J. S., and Roy, Alain J. G. *Le format MARC Canadien*. Montreal: ASTED, 1975. 48p. $4.00

Foundation Center Source Book, 1975/1976. Ed. by Terry-Diane Beck, and Alexis Teitz Gersumky. New York: Foundation Center, dist. by Columbia Univ. Press, 1975–76. 2v. $130.00. (LC 75-33481) (ISBN 0-87954-007-9, v.1; ISBN 0-87954-008-7, v.2)

Goode, Stephen H. *Venereal Disease Bibliography for 1973*. Troy, N.Y.: Whitston, 1975. 276p. $15.00. (LC 71-189843) (ISBN 0-87875-058-4)

Goodman, Steven E., ed. *Handbook on Contemporary Education*. New York: Bowker, 1976. 636p. $35.00. (LC 75-26744) (ISBN 0-8352-0640-8)

Goodwater, Leanna. *Women in Antiquity: An Annotated Bibliography*. Metuchen, N.J.: Scarecrow, 1975. 175p. $7.00. (LC 75-23229) (ISBN 0-8108-0837-4)

Guide to the Orin G. Libby Manuscript Collection and Related Research Collections. Comp. by John B. Davenport. Grand Forks, North Dakota: Orin G. Libby Manuscript Collection, Chester Fritz Library, Univ. of North Dakota, 1975. 143p.

Hanifi, M. Jamil. *Historical and Cultural Dictionary of Afghanistan*. Metuchen, N.J.: Scarecrow, 1976. 149p. $6.00. (LC 75-40249) (ISBN 0-8108-0892-7)

Hanson, Carl A. *Dissertations on Iberian and Latin American History; An Interdisciplinary Bibliography of Dissertations Completed in the United States, Great Britain, Canada, and Ireland, 1889–1969*. Troy, N.Y.: Whitston, 1974. 400p. $20.00. (LC 74-97478) (ISBN 0-87875-073-8)

Historiography; A Bibliography. Comp. and ed. by Lester D. Stephens. Metuchen, N.J.: Scarecrow, 1975. 277p. $9.00. (LC 75-17578) (ISBN 0-8108-0856-0)

Hoffman, Herbert H. *What Happens in Library Filing*. Hamden, Conn.: Linnet Books, 1976. 176p. $7.50. (LC 75-28187) (ISBN 0-208-01557-4)

Hug, William E. *Instructional Design and the Media Program*. Chicago: American Library Assn., 1975. 148p. $6.50. (LC 75-40425) (ISBN 0-8389-0207-3)

An Illustrated Guide to the International Standard Bibliographic Description for Monographs. Comp. by John L. Sayre and Roberta Hamburger. Enid, Okla.: Seminary Press, 1975. 85p.

Index to Commonwealth Little Magazines 1970–1973. Comp. by Stephen H. Goode. Troy, N.Y.: Whitston, 1975. 551p. $25.00. (LC 66-28796) (ISBN 0-87875-027-4)

Institutional Library Services; A Plan for the State of Illinois. By Social, Educational Research and Development, Inc. Chicago: American Library Assn., 1970. 110p. (LC 77-93276) (ISBN 0-8389-0080-1)

International Academic and Specialist Publishers' Directory. New York: Bowker, 1976. 555p. $25.00. (LC 75-7800) (ISBN 0-85935-002-9)

Kim, Ung Chon. *Policies of Publishers; A Handbook for Order Librarians*. Metuchen, N.J.: Scarecrow, 1976. 132p. $7.50. (LC 75-33629) (ISBN 0-8108-0882-X)

Kissinger, Warren S. *The Sermon on the Mount: A History of Interpretation and Bibliography*. Metuchen, N.J.: Scarecrow, 1975. 309p. $12.50. (LC 75-29031) (ISBN 0-8108-0843-9)

Kronick, David A. *A History of Scientific and Technical Periodicals; the Origins and Developments of the Scientific and Technical Press 1665–1790*. Metuchen, N.J.: Scarecrow, 1976. 352p. $13.50. (LC 75-41487) (ISBN 0-8108-0844-7)

Literary Research Guide. ed. by Margaret C. Patterson. Detroit: Gale, 1976. 385p. $18.50. (LC 75-13925) (ISBN 0-8103-1102-X)

Methodist Union Catalog: Pre-1976 Imprints. ed. by Kenneth E. Rowe. V. 1: A–Bj. Metuchen, N.J.: Scarecrow, 1975. 438p. $22.50. (LC 75-33190) (ISBN 0-8108-0880-3)

Morris, Richard B., ed. *Encyclopedia of American History.* Bicentennial ed. New York: Harper and Row, 1976. 1245p. $22.76. (LC 74-15839) (ISBN 0-06-013081-4)

Nitecki, Joseph Z. *Directory of Library Reprographic Services: A World Guide.* 6th ed. Weston, Conn.: Microform Review Inc., 1976. 178p. $9.95. (LC 75-20413) (ISBN 0-913672-04-1)

Obituaries from the Times 1961–1970. Comp. by Frank C. Roberts. Reading, Eng.: Newspaper Archive Development Ltd., 1975. 952p. (ISBN 0-903713-98-5)

Oettinger, Anthony G. *Elements of Information Resources Policy: Library and Other Information Services.* Rev. ed. Cambridge, Mass.: Harvard Univ., Program on Information Technologies and Public Policy, 1975. 217p. $8.00, pa.; $2.25, microfiche. (Available through National Technical Information Service, no. PB248309/AS)

Ohlers, Carol Ann, comp. *Index des règles de catalogage Anglo-Américaines, Chapitre 6 (Révisé).* Montreal: ASTED, 1975. 20p. $1.75.

Popular Music Periodicals Index 1974. Comp. by Dean Tudor and Andrew D. Armitage. Metuchen, N.J.: Scarecrow, 1975. 413p. $15.00. (LC 74-11578) (ISBN 0-8108-0867-6)

Rolland-Thomas, Paule, and Deslauriers, Pierre. *Règles de catalogage Anglo-Américaines, Chapitre 6 (Révisé).* Montreal: ASTED, 1975. 101p. $3.25.

Segregation and the Fourteenth Amendment in the States. Ed. by Bernard D. Reams and Paul E. Wilson. Buffalo, N.Y.: William S. Hein, 1975. $27.50. (LC 72-92824)

Serials in Psychology and Allied Fields. Comp. by Margaret Tompkins and Norma Shirley. Troy, N.Y.: Whitston, 1976. 472p. $22.50. (LC 75-38213) (ISBN 0-87875-083-5)

Sippl, Charles J., and Kidd, David A. *Microcomputer Dictionary and Guide.* Champaign, Ill.: Matrix, 1975. 704p. $17.95. (LC 75-39503) (ISBN 0-916460-01-0)

Trade Names Dictionary. Detroit: Gale, 1974. 2v. (LC 75-33346) (ISBN 0-8103-0692-1)

Triche, Charles W., and Triche, Diane S. *The Euthanasia Controversy 1812–1974; A Bibliography with Select Annotations.* Troy, N.Y.: Whitston, 1975. 242p. $18.00. (LC 75-8379) (ISBN 0-87875-071-1)

U.S. Government Scientific and Technical Periodicals. Comp. by Philip A. Yannarella and Rao Aluri. Metuchen, N.J.: Scarecrow, 1976. 271p. $10.00. (LC 75-38740) (ISBN 0-8108-0888-9)

Whitfield, Danny J. *Historical and Cultural Dictionary of Vietnam.* Metuchen, N.J.: Scarecrow, 1976. 377p. $13.50. (LC 75-38729) (ISBN 0-8108-0887-0)

Wilgus, A. Curtis. *The Historiography of Latin America: A Guide to Historical Writing, 1500–1800.* Metuchen, N.J.: Scarecrow, 1975. 348p. $15.00. (LC 75-23275) (ISBN 0-8108-0859-5)

Wypyski, Eugene M. *Legal Periodicals in English.* Dobbs Ferry, N.Y.: Glanville Publishers, 1976. V. 1– $60.00, with binder. (LC 75-42308) (ISBN 0-87802-054-3), set)

Young, Ian. *The Male Homosexual in Literature: A Bibliography.* Metuchen, N.J.: Scarecrow, 1975. 251p. $9.00. (LC 75-25611) (ISBN 0-8108-086-7)

Zingman, Barbara. *The Dial; An Author Index.* Troy, N.Y.: Whitston, 1975. 266p. (LC 75-8380) (ISBN 0-87875-072-X)

Zulauf, Sander W., and Weiser, Irwin H. *Index of American Periodical Verse: 1974.* Metuchen, N.J.: Scarecrow, 1976. 561p. $17.50. (LC 73-3060) (ISBN 0-8108-0872-2)

Put Widener on your shelf.

The Widener Library Shelflist is an invaluable reference guide for scholars and librarians, based on the collections in Harvard University's famed Widener Library.

Each shelflist contains a detailed subject classification as well as an alphabetical and a chronological listing of all material. The essential bibliographical description of a book—author, title, place and date of publication—is at your fingertips. It's like having part of the Widener Library card catalog on your shelf.

The first twenty volumes in the series were produced from computer printouts and average seventy entries per page. In subsequent volumes copy is set by computerized photo-composition in two-column pages with approximately 140 entries per page. Volumes are each 8½ by 11 inches, printed on durable paper and bound in cloth.

Other Widener Library Publications:
Current Journals in the Sciences/*Sixth Revision*
Paper only, $9.50

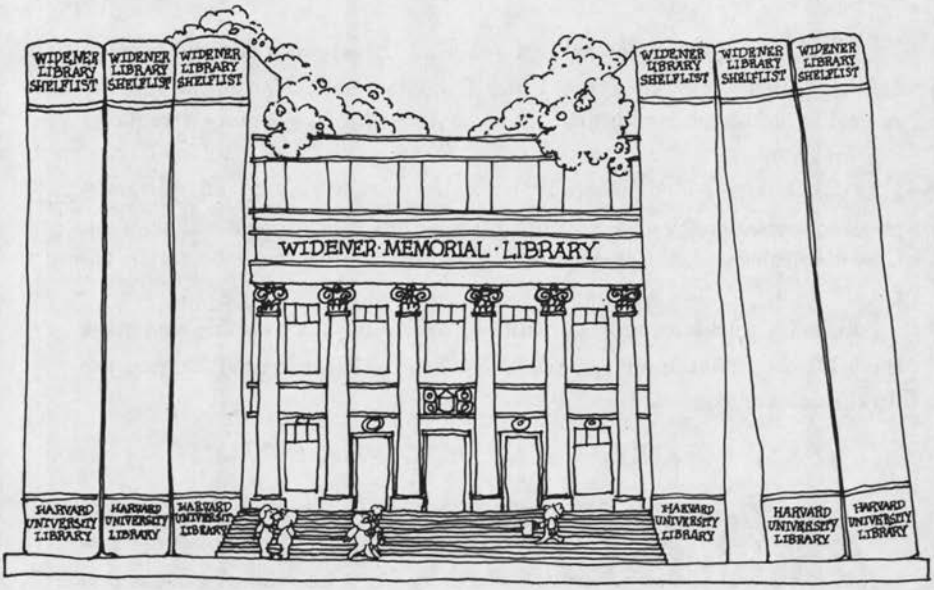
Building a Great Library/*The Coolidge Years at Harvard*
William Bentinck-Smith/$17.50

Harvard University Press
Cambridge, Mass. 02138

The latest additions to the collection include:

Ancient History.
This volume catalogs more than 11,000 works on the history, civilization, government, economic and social conditions, and geography of the Mediterranean region and Western Asia down to the Barbarian invasions in Europe and the Arab conquest in Asia and Africa. Included as well are listings of Egyptian and Assyro-Babylonian literatures. Although works on archaeology and prehistoric times are generally excluded, those on Assyrian and Babylonian archaeology form a part of this volume. No. 55 $40.00

British History.
Included in this catalog are 45,000 works on the history, civilization, government, general social life and conditions, and various races of the British Isles. Most works on economic history and conditions and on special aspects of social conditions can be found in Widener Library Shelflists 23-24 and 45-46. An exception is the inclusion in this catalog of works on the general economic history of Ireland. These volumes also cover writings on the English-speaking peoples and the British Empire in general. Nos. 53 & 54 $85.00



NEW Up-To-Date Books From Noyes Data

NOYES DATA has developed two new techniques of vital importance to those who wish to keep abreast of rapid changes in technology and business conditions: 1) our advanced publishing systems permit us to produce durably-bound books within a few months of manuscript acceptance; 2) our modern processing plant ships all orders on the day after they are received.

HARDCOVER BOOKS—LATE SPRING 1976

HOW TO DISPOSE OF TOXIC SUBSTANCES AND INDUSTRIAL WASTES by P.W. Powers: This book discusses all those ultimate disposal and recovery methods that are technologically feasible today. Many toxic or hazardous wastes contain valuable materials that can be recovered. ISBN 0-8155-0615-5; $48

TOBACCO SUBSTITUTES by Marshall Sittig: The ideal tobacco substitute is devoid of ingredients that produce toxic smoke, yet furnishes contentment and satisfaction equal to normal tobacco doses. Practical manufacturing ways and means to this end are described. ISBN 0-8155-0616-3; $36

DURABLE PRESS TREATMENTS OF FABRICS—RECENT DEVELOPMENTS by R.H. Manly: Over 300 processes using a wide variety of chemically different textile treating agents broadly related to the concepts of "durable press" and "wash and wear." ISBN 0-8155-0617-1; $39

FOOD FLAVORING PROCESSES by N.D. Pintauro: When food loses its original fresh odor, its flavor goes also and our senses classify it as stale. But flavors and odors can be "fixed" by chemical complexing, plating onto solid carriers, frangible or permeable microencapsulation and other subtle techniques. This book tells how to do this on a commercial scale. ISBN 0-8155-0618-X; $39

DEEP COAL MINING—WASTE DISPOSAL TECHNOLOGY by W.S. Doyle: Discusses methods designed to prevent and control pollution associated with the deep mining of coal. The extinguishing of burning refuse banks and their reclamation is described in detail. ISBN 0-8155-0619-8; $36

RADIATION SPECTRA OF RADIONUCLIDES by T.B. Metcalfe: The unique feature of this presentation of all gamma spectra in tabular form provides the interpreter of mixed radiation emitters with the cross-referencing essential to the identification of each contributing isotope. ISBN 0-8155-0620-1; $36

MEMBRANE TECHNOLOGY AND INDUSTRIAL SEPARATION TECHNIQUES by P.R. Keller: Over 280 processes are described. Fabrication techniques as well as end-use applications are given in detail. Electrodialysis and reverse osmosis units using semipermeable membranes are being installed the world over. ISBN 0-8155-0621-X; $39

ndc NOYES DATA CORPORATION
NOYES BUILDING, PARK RIDGE, NEW JERSEY 07656

Working bibliographic tools that save time, space, and money.

Now on Microfiche, Library of Congress/National Union Catalogs.

As a librarian, you already know the reference value of the Library of Congress/National Union Catalogs. Now discover the working value of LC/NUC on fiche. You will find it's a useful tool that can make your cataloging and bibliographic searches more convenient, more productive, and more economical.

The entire 1898-1974 series—more than 500 volumes—can be stored in less than 15 lineal feet of drawer space. Just a fraction of the 86 feet of shelving required for hardbound volumes. Apart from substantial storage cost savings, this format greatly simplifies access and increases useability.

With the tip of your finger you can quickly flip through eye-legible headers to the entry you seek. No heavy volumes to handle; and since you retrieve individual fiche, many people can access the file simultaneously.

Need a catalog card? The touch of a button yields a full-size master for copying, in a matter of seconds.

With all these benefits, LC/NUC on microfiche costs 55% *less* than hardbound. Considering the savings, you can afford to place this invaluable tool in most reference and technical departments in your library.

The Library and Education Division of Information Handling Services (formerly Microcard Editions) offers a full series of LC/NUC on fiche. This includes complete Library of Congress Catalogs from 1898 to 1952 and National Union Catalogs from 1952 to the present. They are available by section, but if you purchase the entire 1898-1974 series, we will include a Vantage I reader, free.

Rounding out our comprehensive bibliographic services, we now publish the 1942-1962 Master Cumulation on fiche, and we offer a monthly LC/NUC service to keep your catalogs complete and up-to-date.

To learn more about how LC/NUC on fiche can help make your work easier and more productive, please clip and mail the coupon or call IHS directly. Information Handling Service, Library and Education Division, P.O. Box 1154, Englewood, Colorado 80110. Telephone (303) 771-2600 TWX 910/935-0715.

Information Handling Services
Library and Education Division
Formerly Microcard Editions
P.O. Box 1154
Englewood, CO 80110
Telephone (303) 771-2600
TWX 910/935-0715

☐ I'd like to see your LC/NUC Series. Please have your representative call for an appointment.

☐ Send information about your complete LC/NUC Series.

Name_____

Title_____

Institution_____

Address_____

City/State/Zip_____

Telephone_____

CRL 5/6

Information Handling Services
Library and Education Division
An Inforonics Company — Formerly Microcard Editions

Recent books in Science from Academic Press

AP Reviewed!

Second English Edition 1974
translated from the
Third German Edition 1974

Methods of Enzymatic Analysis

VOLUMES 1-4

edited by HANS ULRICH BERGMEYER
assisted by Karlfried Gawehn
translated by D. H. Williamson
with the assistance of P. Lund

"The original edition of this book was a very useful collection of practical enzymatic analytic procedures contained in a single volume. . . . From almost every possible viewpoint the new edition is superb. The individual articles are each written by an expert in the field and, in most cases, represent the current state of the art. . . .

"This edition of 'Methods of Enzymatic Analysis' represents an achievement of considerable importance. It should rapidly become a necessary reference for any laboratory whose work involves enzymes in any role."—*Journal of the American Chemical Society*, November 26, 1975

Volume 1/1974, 647 pp., $63.00/£34.65
ISBN: 0-12-091301-1
Volume 2/1974, 639 pp., $63.00/£34.65
ISBN: 0-12-091302-X
Volume 3/1974, 582 pp., $63.00/£34.65
ISBN: 0-12-091303-8
Volume 4/1974, 758 pp., $63.00/£34.65
ISBN: 0-12-091304-6

Set Price for all four volumes, $224.00
Published jointly by Academic Press and Verlag Chemie.

Bioenergetics of Photosynthesis

edited by GOVINDJEE

A Volume in the CELL BIOLOGY Series

"The bioenergetic aspects of photosynthesis are discussed with emphasis on the biochemical and biophysical aspects. The historical development of major concepts, experimental data and recent findings are reviewed. . . . Research workers and students in molecular biology, photosynthesis, plant science, biochemistry and biophysics will find this a valuable reference."
—*Biological Abstracts*, January 1, 1976

1975, 661 pp., $43.00/£23.65
ISBN: 0-12-294350-3

Kinetics of Enzyme Mechanisms

by J. TZE-FEI WONG

"This book is written by a professional. Dr. Wong has plenty of experience in analysing experimental data and he is fully aware that the sophistication of the algebraic treatment must be matched by the quality of the data.

". . . The author's critical judgement of different steady-state treatments will be very valuable for most of the potential readers.

". . . I would certainly recommend to any graduate student and research worker, who has some basic understanding of kinetics and calculus, to use this book for at least part of his journey towards a professional training in enzymology."
—*Nature*, December 25, 1975

1975, 308 pp., $20.25/£7.80
ISBN: 0-12-762250-0

Higher Excited States of Polyatomic Molecules

VOLUMES 1 and 2

by MELVIN B. ROBIN

"This highly specialized book deals primarily with the interpretation of vacuum ultraviolet absorption spectra and related photoelectron spectra for a very wide range of polyatomic molecules. . . .

"This book will be of great value to all those who are concerned with the higher energy states of polyatomic molecules. The literature coverage extends to January 1974 and seems quite complete. A considerable amount of data is included in the form of spectral curves and tables."
—*Applied Spectroscopy*, January 1976

Volume 1/1974, 382 pp., $32.50/£17.90
ISBN: 0-12-589901-7
Volume 2/1975, 418 pp., $39.50/£21.70
ISBN: 0-12-589902-5

N.B.: Postage plus 50¢ handling charge on all orders not accompanied by payment.
Prices are subject to change without notice.

Academic Press
A Subsidiary of
Harcourt Brace Jovanovich, Publishers
111 FIFTH AVE., NEW YORK, N. Y. 10003
24-28 OVAL ROAD, LONDON NW1 7DX

STECHERT MACMILLAN
Specialists in U.S. and Foreign Imprints, Continuations/Serials and Books

104 years head start in developing continuations/serials service

The acquisition of continuations/serials is one of the most complex problems that face librarians. Their irregular frequency, and the long time-spans which often occur between volumes of series, require both experience and the most sophisticated of recordkeeping systems. Stechert Macmillan offers one of the widest ranges of continuations/serials on a standing order basis.

Over a period of 104 years, Stechert Macmillan has developed the acquisition of continuations/serials into a fine art. In fact, we have supplied some continuations in an unbroken series since 1900.

Stechert Macmillan also provides comprehensive acquisition service for books published in North American and European countries, and will assist customers with acquisition of monographs from other areas.

A WORLD OF DIFFERENCE

Stechert Macmillan, Inc.

Serving Libraries Since 1872

866 Third Avenue • New York, N.Y. 10022 • (212) 935-4260

NEW YORK • LONDON • PARIS • STUTTGART • SYDNEY

See us at **Booth 228** Special Library Association Meeting

Announcing

The State Publications Program

For 10% prepublication discount, place your order before August 31, 1976.

Now for the first time a single information service will give you convenient access, control *and* retrieval of official state publications. At a price you can afford.

The ***State Publications Program*** from the Library and Education Division of Information Handling Services is more than a simple microfiche republishing venture. It's a fully integrated system that includes comprehensive bibliographic aids and indexing for official publications of all 50 states, Puerto Rico, and the Virgin Islands.

The key element of this new service is the quarterly, hardcopy ***Checklist of Current Publications.*** Arranged alphabetically by state, and fully indexed, the ***Checklist*** gives you extensive bibliographic coverage of all discoverable official documents of state agencies and departments. Price for the ***1975 Checklist of Current Publications*** (three quarterly and one cumulative volumes) is **$185.** Place your order before August 31, 1976 and receive a 10% discount.

The second major element of the program is a selection of current state publications in your choice of silver or diazo microfiche. The fiche are complemented by an extensive, hardcopy ***Bibliography/Index*** for efficient document access and control.

Both the ***Bibliography*** and the publications are arranged in 18 subject categories, including such topics as agriculture, labor and employment, taxation, revenue and budgets, transportation, law enforcement, health care, and environment.

Significantly, this file is enriched by important—and difficult-to-obtain—legislative council, committee, and commission reports. The price, **$3,000,** includes approximately 2,000 separate titles issued in 1975, on silver halide microfiche (Type 1A), and two, semi-annual volumes of the ***Bibliography/Index***. Orders confirmed by August 31, 1976 receive a 10% discount.

The final segment of the ***State Publications Program*** is a ***custom service*** for selective, title-by-title acquisition. Through this service, you may obtain individual documents, the documents of a particular state or agency, or the documents pertaining to a particular subject. Please inquire about availability, prices and discounts.

Thorough indexing. Comprehensive bibliographic control. Convenient, single source document acquisition. The IHS State Publications program will not only help make your work easier, but also enable you to provide significant new research services.

For complete information, including the publishing schedule for 1972-1974 and future years, please clip and mail the coupon. Or call Agnes Hartman at IHS. Information Handling Services, Library and Education Division, P.O. Box 1154, Englewood, Colorado 80110. Telephone (303) 779-0600. TWX 910/935-0715.

Information Handling Services
Library and Education Division
(Formerly Microcard Editions)
P.O. Box 1154
Englewood, Colorado 80110
Telephone (303) 779-0600
TWX 910/935-0715

- ☐ Please enter and confirm my order for the *1975 Checklist of Current Publications.*
- ☐ Please enter and confirm my order for *Select 1975 State Publications,* including the *Bibliography/Index.*
- ☐ Please have your representative call for an appointment.
- ☐ Please send more information about the *State Publications Program.*

Name_____

Title_____

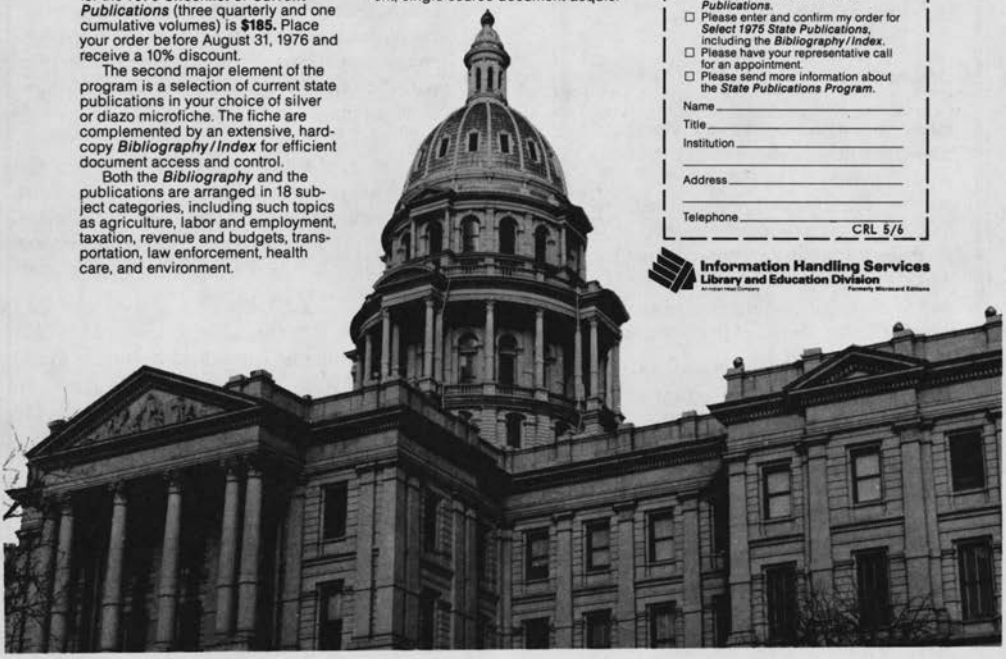
Institution_____

Address_____

Telephone_____

CRL 5/6

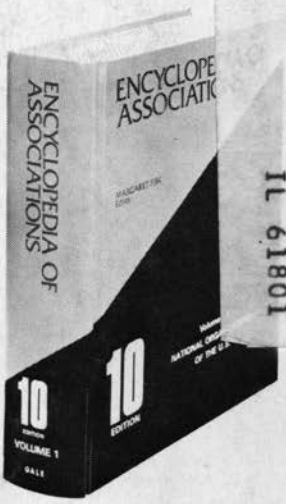
Information Handling Services
Library and Education Division
American Hoist Company — Formerly Microcard Editions



13,583 SOURCES OF UP-TO-THE MINUTE INFORMATION

ENCYCLOPEDIA OF 10 ASSOCIATIONS

10 EDITION



Volume 1. NATIONAL ORGANIZATIONS OF THE U.S. 1,417 pages. Alphabetical Index to Organization Names and Keywords. CIP: L.C. No. 76-4878. ISBN 0-8103-0127-X. $64.00.

For over 20 years, Gale's *Encyclopedia of Associations* has been popular with librarians and researchers because it is one of the few reference tools completely in tune with the information explosion. In many fields, new ideas and techniques appear with such rapidity that data in books and periodicals are obsolete by the time they reach library shelves. *EA* solves the problem by telling you exactly whom to write, phone, or visit for the latest facts, figures, and opinions.

The basic Volume 1 lists 13,583 active organizations in 17 major subject categories, such as trade, agriculture, law, education, religion, etc. Each entry provides all you need to know about the association—its official name, popular name or acronym, address, phone number, number of members, chief executive, committees, publications, convention/meeting schedule, and much more.

Volume 2. GEOGRAPHIC AND EXECUTIVE INDEX. 718 pages. CIP: L.C. No. 76-4878. ISBN 0-8103-0132-6. $45.00.

Volume 2 is divided into two sections. The *Geographic Index* lists in state and city order all the associations that are arranged in Volume 1 by subject. Included are addresses, phone numbers, and names of executives. The *Executive Index* lists by surname all the executives mentioned in Volume 1, followed by their titles, names of their organizations, complete addresses, and phone numbers. Each listing in both sections gives the entry number of the more detailed organization entry in Volume 1.

Volume 3. NEW ASSOCIATIONS AND PROJECTS. A periodical publication which supplements information in Volume 1. Cumulatively indexed. ISBN 0-8103-0130-X. Inter-edition subscription, with binder for new subscribers, $55.00.

The periodical supplement service keeps you abreast of the information explosion. It provides, in the same format as Volume 1, full descriptions of *newly* formed associations, which are of particular interest to researchers, because *new* groups tend to be concerned with *new problems* and *new ideas* not adequately covered elsewhere.

Reviewers Have Had High Praise for EA:

"The *Encyclopedia of Associations* has earned its reputation as a cornerstone of any sound general reference collection . . . In a word, *EA* is a basic reference tool. All libraries should have it." (*RQ*, Spring 1973)

"The work is still the most comprehensive directory of associations in the U.S." (*Booklist*, "Reference and Subscription Books Reviews," Oct. 15, 1975)

Included in *Choice's* "Opening Day Collection," 3rd Edition.

"Highly recommended." (*American Reference Books Annual*, 1973)

"The only comprehensive source of detailed information on nonprofit American membership organizations of national scope." (*Guide to Reference Books for School Media Centers*, 1973)

The *Encyclopedia of Associations* and all Gale books of a continuing nature are available on Standing Order. Complete catalog of Gale books sent on request.

GALE RESEARCH CO.

Book Tower • Detroit, Michigan 48226